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This annotated bibliography of 110 documents on manpower and educational planning is intended to present students with a critical appraisal of materials currently available. The bibliography includes sections on demography; economic development and manpower planning; agricultural development, rural education and manpower; educational planning and primary education; secondary education and midlevel manpower; tertiary education and high-level manpower; educational administration and the economics of education; and media and curriculum. The annotations are quite detailed and include comments as to the usefulness of the particular book or article being analyzed. Most of the entries were published in the 1960's. (TT)

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MANPOWER AND EDUCATIONAL PLANNING: AN ANNOTATED BIBLIOGRAPHY OF CURRENTLY AVAILABLE MATERIALS

Edited by

Jesse Goldstaub, Ph.D.
Associate Professor

International and Development Education Program

School of Education

University of Pittsburgh

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PREFACE

This annotated bibliography evolved out of the first offering of IDEP 201/ESD 281, "Education and Manpower Planning," during the Winter 1968 term. Seven participants: Ingrid Buxell, Irwin Dubinsky, Karen Figler, David Freedman, Orville Joyner, David McCahon, and Donovan Peterson prepared the bibliographies as individual investigations into the available literature in their assigned areas of operational specialization. A subsequent section on higher education/highly qualified manpower was prepared by Sang-Joo Lee while studying with me during the Spring 1968 term.

Hence, the following compilation reflects a critical appraisal of the materials available here at the University of Pittsburgh and by no means is it purported to be a comprehensive coverage of the field. There are quite a number of bibliographies which have been published in the past five years covering "human resources"--as it is broadly perceived (and ill-defined). However, the fact that all but a minute portion of the works included therein are not currently accessible here renders these bibliographies functionally ineffective for the student who, here and now, is just starting out into the forest of Manpower and Educational Planning and needs to be able to identify a few of the trees at hand (there are some poison oaks about).

The progression of presentation is an attempt at following the logical flow of a planning sequence, although after "start up" there is obviously a great deal of simultaneous, and hopefully consonant, dialogue going on between sectors and amongst sub-sectors. One usually begins with a demographic base and projections; evolves labor force participation rates and an estimate of economically active population and/or employed labor force, by sector of economic activity; conceives an occupational mix by sector; and proceeds to reconcile supply to demand for various skill levels by employing indicators of level of educational attainment for occupational groups and internal/external educational training systems performance indicators. At the same time the social demand affecting elementary-grade education has to be taken into account while attempting to ensure consistency in "flow-throughs" from primary to tertiary level, especially at connecting terminal grades. This is coupled with manipulation of system structure and content, and cost elements, as well as logistic support.

In effect, therefore, this preliminary bibliography for Manpower and Educational Planning is intended as an operationally oriented introduction to the mystique; by professional-caliber students, for students. In compiling, revising and editing this jig-saw puzzle, while shifting selections (and parts thereof) about, I have avoided forcible altering individual styles for the mere sake of "continuity"--the darling of the conventional mentality--and I do not believe that I can be indicted for having done too much violence to their work or their friendship, except by giving the former away in their name.

Jesse Goldstaub

July 1968

I

DEMOGRAPHY

Blanc, Robert. Handbook of Demographic Research South of the Sahara. London: Commission for Technical Cooperation in Africa South of the Sahara, 1959.

This study attempts: 1) to review main notions on general demography and methods of study usually employed in evolved society; and 2) to outline problems peculiar to demography of underdeveloped areas.

The chief demographic divisions are geography, sex, age, marital status, ethnicity and occupation. Changes within these groups are classified as to whether they affect all or only some of the population.

Although the Study relates directly to Africa, the basic definitions and methods are pertinent for any area. He points out deficiencies of studies in underdeveloped areas because of rudimentary administration, weakness of infrastructure, trying climatic conditions and low levels of education. Furthermore, enough competent men may not be available to do the survey. Considering all the problems, one of the only alternatives is to rely on sampling, even though he points out the difficulty of this approach.

In discussing the special approach in underdeveloped areas, he delves into formulation and implementation of surveys, including psychological preparation, personnel selection, use of indicators and how to overcome cultural factors which may affect accuracy of information.

He concludes by suggesting several supplementary methods of data collection such as intinerant registry and health units.

Carleton, Robert O. "Effect of Educational Improvement on Fertility Trends in Latin America." World Population Conference, 1965. Vol. IV. New York: Department of Economic and Social Affairs, United Nations, 1967.

To decrease the birth rate, motivation is necessary; and educational and economic improvements are necessary to cause motivations. What follows is a brief notation of the effects of education on social action and conditions obstructing family size. It relates in particular to social mobility, quality vs. quantity family patterns, differential class education, costs, Catholicism and communication patterns of couples.

Chen, Kuan-I. World Population Growth and Living Standards. New Haven, Conn.: College and University Press, 1960.

Very general and basic discussion of the factors influencing population growth and its effect on living standards, peace and development in a world joined by improvements in technology and communication. Comments that underdeveloped areas will contain 71 percent of world's population in the year 2000.

Hawley, Amos H. "World Urbanization: Trends and Prospects." Population: The Vital Revolution. Ronald Freedman, (ed.). New York: Doubleday and Company, Inc., 1964.

Hawley describes historical development from ancient times, discussing in particular the relation of demographic factors to urban growth, e.g., rural population increases providing surplus manpower. Aside from the usual description of the effect of rapid growth on economic and social patterns and their effect on demographic patterns, he comments that urban growth does vary directly with the percent of economically active population in primary production.

The problem is complicated by the fact that no major open spaces exist to absorb population.

International Labor Office. Internal Migration, 1945-57. Geneva: I.L.O., 1959.

Chapter X - Demographic Effects:

Age and Sex: Migrants are usually economically active young adults and men and consequently tend to lower the average age of the adult population and raise the proportion of males in the recipient areas. However, the effects vary with the ratio of net migration to total population and according to the ratio of dependents to economically active. The net effect may also be offset by movements in an opposite direction within the same population. The effect on the labor force is usually greater than on total population. Fluctuations are also noticeable, e.g., an out-migration of males may be followed at a later period by a large flow of dependents and females.

Natural Population Trends: difficult to determine, but may not be as great as expected because of limitations on marriages, etc.

Chapter XI - Economic and Social Effects:

Here the authors consider effects of migration, of immigration and of emigration on countries as well as on the migrants. Significant problems are the influence on real average income and its distribution, both of which depend to a certain extent on absorptive capacity or ability to prevent inflation. Migration can stimulate investment in the long-run, but the authors state that short-term policies usually work out to disadvantage. Foreign investment may also be significant in determining occupational flow.

The problems of migrants which are described include language, assimilation, living conditions, discrimination, stability of employment and repatriation. With respect to the last two, instability increases when families are left behind and when country of settlement is close to country of origin.

Kuroda, Toshio. "Internal Migration: An Overview of Problems and Studies." World Population Conference, 1965. Vol. IV. New York: United Nations Department of Economic and Social Affairs, 1967.

Article was,as titled, an overview which included discussion of one of the migration theories: migration as a response to differential income-distribution. Where it occurs it has a leveling effect. The implications of the theory relate to the fact that the illiterate, infirm and unskilled are left in the rural areas.

McClintock, Charles G. World Population Pressures. Santa Barbara, California: Technical Military Planning Operation, General Electric Company, 1960.

Aside from the usual discussion of the causes of the population explosion summed up as man's inbility to control a natural control mechanism, this report is most unique in the implications derived: it predicts more military rebellions, political and economic upheavals, increased and more successful efforts by Russia to exert ideological and economic influence and more opportunity for Russia to ignite "limited" wars. To counteract this tendency, the U. S. must redirect foreign aid to expanding capital resources rather than continuing to aggravate the problem of over-population by health programs.

Considering the suggestions of the report and the sponsorship, it would seem to be more propagandistic than scientific--at least in its policy implications.

Mortara, Giorgio. "Factors Affecting Rural-Urban Migration in Latin America: Influence of Economic and Social Conditions in these Two Areas." World Population Conference, 1965. New York: United Nations Department of Economic and Social Affairs, 1967.

This article pointed to some more specific factors which prevent agricultural improvement and lead to increased migration, such as the relative ease of transport and communication, unfavorable natural conditions which prevent settlement, and the land-tenure system. Backwardness of techniques, competition of cottage with large-scale industry, and depression of agricultural prices also prevent development. Technology benefits urban areas but reduces the demand for labor, which the rural exodus increases in the search for better services and opportunity. Within the rural sector, education does not prepare students for rural occupational success, but, along with other social factors such as apathetic public authorities, it does seem to create contempt for rural life.

Ponsioen, J. A. "An Analysis of a Policy Regarding Rural Migration in Developing Countries." World Population Conference, 1965. Vol. IV. New York: United Nations Department of Economic and Social Affairs, 1967.

A short but excellent article which discusses the problems of rural living and the reasons for migrating to urban areas on a very personal, intuitive level.

People move from the most primitive and the poorest areas. In subsistence areas, nutrition has decreased even more than in other areas because of mono-production for export; wage labor contributes to the disappearance of cooperative labor, increasing economic independence and responsibility of women becomes a compliment to vulnerability and mobility of males; buying power rises but standards drop; and a sector of middlemen and money lenders grow to dissipate profits. On the other side, urban areas are formally organized to prevent arbitrary conduct of economy, polity, legal system, etc.

Shanty-towns, however, are "graves of 'over-migrators' and their existence places a burden on officials to eliminate or alleviate conditions. As an alternative, it is suggested to move urban facilities and functions to the rural areas, creating at least intermediate centers. He concludes by discussing the possibilities of such a program and the demographic consequences.

Stolnitz, George J. "The Demographic Transition: From High to Low Birth Rates and Death Rates." Population: The Vital Revolution. Ronald Freedman (ed.). New York: Doubleday and Company, Inc., 1964.

Stolnitz summarizes past declines of vital rates and the prospects for future downshifts, noting that all nations in the modern era which moved from traditional agricultural-based economy to an industrial urbanized base have also moved from a condition of high to low mortality and fertility, leading to an enormous increase in population and massive shifts in proportions. The age composition tends to remain quite unaffected by movement from high to low mortality but declines in fertility have a sharp effect.

The author points out that only a minority of the world's population has already made substantial demographic transition and discusses future trends, technological effects and the economic implications of population concentration in the underdeveloped areas.

United Nations. Department of Economic and Social Affairs. Methods for Population Projection by Sex and Age. New York: United Nations, 1956.

An excellent reference for methodology if any census data is available. Provides models for predicting fertility, mortality, etc.

United Nations. Department of Economic and Social Affairs. "Internal Migration with Special Reference to Rural-Urban Movement." World Population Conference, 1965. Vol. I. Summary Report. New York: United Nations, 1966.

This article describes rural-urban movement as one which is occurring universally--transcending political, economic, and ideological variations--and strikes an optimistic tone: "Urbanward migration appears to be a great demographic movement toward modernization and improvement of the world's level of living through industrialization."

Nevertheless, the authors point to shanty-town development and social disorganization, including large sex imbalances. Because of the stress on urban problems, there may be a tendency to disregard the consequences of population drain in rural areas--e.g., age structure, sex ratios, fertility, vital rates and socio-economic conditions.

Three key variables--income, employment, rapid population increase--are delineated, and it is suggested that migration policy, cause and effects, need more study but that where the disparity is greater migrant flows are greater. It is also hypothesized that past trends may have little or no significance for understanding the current situation.

The relation between education and demography is indicated as high birth rates, decreasing infant mortality and rapid urban development places extreme pressure on the educational system. However, the higher the educational level, the less births; and these differentials accelerate after primary levels. Migrants also tend to be better educated and migration itself may reduce fertility even more.

United Nations. Department of Social Affairs. The Determinants and Consequences of Population Trends. New York: United Nations, Population Studies No. 17, 1953.

Part IX - Factors Affecting Population Trends:

Effects of economic and social factors on mortality, fertility, migration, and future population trends are considered.

Mortality: medical and statistical evidence, limited by lack of data for 40 percent of world population, provides basis for hypotheses. A few of the differentials cited are income, illiteracy, percent in agriculture, number of persons per physician, and race. Historical patterns, in particular the influence of economic development, rising income and social reform, affect mortality by natural as well as unnatural causes such as suicide. Variations are also evident between geographical areas. Infant mortality must also take account of the father's occupation, legitimacy, etc.

Fertility involves similar considerations, but special emphasis must be placed on social patterns--family size, working attitudes, and so on.

In studying migration, motivation studies have not been too fruitful; therefore, social, political, and, in particular, economic conditions remain prime indicators. Scarcity of land, land-tenure policies, wages, legislation are a few of the significant factors. To determine the dynamic effects of these factors on the various demographic rates and trends, the authors show why interrelationships must be examined.

United Nations Statistical Office. Handbook of Population Census Methods. New York: Studies in Methods, Department of Economic Affairs, June 1954.

A very specific delineation of methods; right down to questions necessary in a census to allow demographic statements in detail.

Zelinsky, Wilbur. A Prologue to Population Geography. Englewood Cliffs, New Jersey: Prentice-Hall, 1966.

Population geography is concerned with the distribution of the population and the reasons for particular concentrations such as physiological requirements; geographical and economic characteristics; culture; and events such as social avoidance, e.g., herding of Jews, Chinese; physical and social disasters and forced transfers.

He discusses organic linkages--age-sex mortality, morbidity, fertility--and occupation and associational factors--residence, migration, class, occupation, race, language, religion--as well as the ratio of population to resources.

Within the scope of the book, the author can only define the basic elements affecting distribution but must omit more detailed explanation of predictable interrelationships.

II

ECONOMIC DEVELOPMENT AND MANPOWER PLANNING

Beeby, C. E. The Quality of Education. Cambridge, Mass.: Harvard University Press, 1966.

Beeby, in a short book, attempts to explain the educational process to economic planners. He rises above questions of technique, to questions on broad strategies in educational development. His recommendations, many of which are quite reasonable, are based upon his "Theory of Educational Stages." Likened to Rostow's "Stages of Growth." Beeby views education as a process of four stages. Key elements in his transition from stage to stage are the level of training and education that the teachers have.

His treatment of the subject is good. He writes well, and almost immediately brings the reader into a new and deeper understanding of education. For those wishing to see the forest from the trees, this book is a must.

Cornehls, James V. "Forecasting Manpower and Education Requirements for Economic and Social Development in Peru." Comparative Education Review, Vol. XII, No. 1, (February 1968), pp. 1-27.

Discusses manpower planning's recent concepts and outlines the steps taken in the beginning stages of manpower and educational forecasting in Peru. Not exactly a "how to," but is helpful in this respect because it takes a common-sense attitude to the circular nature of education and society's somewhat unpredictable role in development. Says the best we may be able to do is work at a series of approximations.

An excellent article, but not to be read for full understanding until one has encountered the same problems he mentions; including the problem of graft and corruption which was attacked collaterally by calling for reform in the budgetary and record-keeping practices in Peru.

The budget proposals set forth do rely heavily on long-term foreign commitment, which may or may not be realistic.

In general, a clear picture of a planning effort has been presented.

Ginzberg, Eli and Smith, Herbert A. "Education and Manpower." Chapter VII, Manpower Strategy for Developing Countries. New York: Columbia University Press, 1967. pp. 109-133.

The authors analyze the relations between education and manpower in an effort to balance the view, on the one hand, of more education without consideration for the socio-economic absorptive capacity of a nation and, on the other hand, of the contention that manpower requirements should determine the expansion of the educational system. The focus is on the developing world, drawing lessons from the case of Ethiopia.

The results are a persuasive case for the need to examine what happens to graduates of various educational levels, how they are "fitted" to the economy and what their employment and career prospects may be. Steps should be taken, by economic and educational planners, to assure that those who pass through various educational levels will have the tools and knowledge which will "facilitate their absorption into any one of many different sectors of the economy." This approach would perhaps force a change in curricula to conform more closely with occupational skill requirements while at the same time determine more accurately which occupations necessitate what types of knowledge. Then planning, especially for education, may become more meaningful and slightly less speculative. However, this approach implies far greater communication and cooperation between educational administrators and employers than may be possible on an extensive scale.

Gross, Bertram M. "National Planning: Findings and Fallacies." Public Administration Review. Vol. XXV, No. V (December 1965), pp. 263-73.

Gross' value to planning has been his ability to take a step backward and forward to evaluate and analyze our current planning efforts for development. Gross critically examines seven findings and fallacies in planning--crisis planning, competitive planning, written plans, planning for resource acquisition, long-range planning, the role of the economist and social system changes.

His insights help one "get a handle" on planning. He views planning as an on-going process, most frequently stimulated by crisis, in an atmosphere where many agencies, individuals and organizations are competing for more resources or to maintain the ones they already have.

Harbison, Frederick and Myers, Charles A. Education, Manpower, and Economic Growth: Strategies of Human Resource Development. New York: McGraw-Hill, 1964. Chapter 10.

Elements in a comprehensive development policy include: a) creation of attitudes of development-mindedness, b) selection of goals, c) framework for achieving goals, d) making strategic investments, e) implementing the course of action.

The time perspective in HRD is considered in terms of short-run programs (under three years), medium-range (four to seven years), and long-range (eight to 20 years). Guidelines are spelled out for the types of activities that can be undertaken according to the time the assistance program is planned.

OJT, science and engineering education are geared directly to economic objectives; however, others such as universal primary education are primarily social objectives and related to economic objectives only in a general way. A greater percentage of the national budget should not be devoted to quality education until waste is eliminated.

Countries are categorized according to their level of development. Suggestions are then made regarding priority educational needs according to the countries level of development. Most importantly, this volume points out that the essence of a strategy of human resource development is the achievement of an effective balance in choices between policy alternatives, and the nature of an effective balance depends on the goals of a society, its level of development, and its leadership.

International Labor Office. Employment Objectives in Economic Development. Report of a Meeting of Experts, Geneva, 1961.

This is an excellent publication on the problems of unemployment and underemployment in the developing countries. The chapter on "The Fuller Utilization of Underemployed Labour" is especially salient.

In countries with a large supply of underemployed labor in rural areas, the following productive activities are discussed as ways of utilizing this labor: local capital construction, application of more labor-intensive methods of cultivation, development of rural industries, rural production activities such as animal husbandry, afforestation, fishing and hunting, and promotion of social services on a self-help basis. Consideration of the implementation problems concerning these activities then follows.

Lines of approach to urban underemployment which are treated by the report include better utilization of existing industrial capacity, development of handicrafts, cottage and small-scale industries, construction works, development of animal husbandry and vegetable and fruit growing within the urban areas, and promotion of social services.

Organization for Economic Cooperation and Development. Employment Forecasting - International Seminar on Employment Forecasting Techniques. Chateau de Karreveld, Brussels, June 4-7, 1962.

Although the problems and techniques of employment forecasting are discussed in relation to three developed countries--Sweden, France, and the Netherlands--this OECD Report still serves as a good work on methodology.

Of particular interest is the section on "Forecasting Manpower Supply" in the chapter on "Employment Forecasting Techniques in the Netherlands" by P. de Wolff. The author discusses some of the considerations to keep in mind when making both long-term and short-term forecasts. He also discusses some of the problems faced in the computation of target-year participation ratios.

Organization for Economic Cooperation and Development. Geographical Distribution of Financial Flows to Less-Developed Countries. Paris: OECD, 1967.

Divides external aid into grant-like flows, net official grants, gross official lending and amortization on official lending, naming granting country and recipients which are grouped by geographic region.

Organization for Economic Cooperation and Development. Problems of Human Resources Planning in Latin America and in the Mediterranean Regional Project Countries. Paris: OECD, 1967.

This report consists of the papers and documents prepared for the OECD Conference held in Lima, Peru, in March 1965. The objective of the Lima Conference was to compare the experiences of the European countries participating in the Mediterranean Regional Project (MRP)--Greece, Italy, Portugal, Spain, Turkey, and Yugoslavia--with those of several Latin American countries on the subject of long -term forecasting of manpower needs.

The report contains a short section on long-term forecasting needs (pp. 40-46) which considers manpower forecasts based on economic forecasts of overall or sectoral production, and forecasts based on the relationship between the economy and the occupational structure.

Chapter II of Part One relates to the economic and manpower situations in the countries under study by the Conference, at the same time calling attention to a diversity of considerations relevant to manpower projections and analysis.

Part Two also provides a most informative document in terms of Zygmunt Slawinski's "The Structure of Manpower in Latin America: Evolution During the Past Few Decades and Long-Term Prospects." In a lengthy account, complemented by an excellent series of tables, this report discusses the quantitative and qualitative changes over time in Latin America's economically active population. The report relates the distribution of the active population by sector of economic activity to both the economically active population *per se* and the total population and considers reasons for proportional changes over time.

Section III of Part Two includes a statistical annex which enables useful international comparisons of the distribution of employment by occupational categories and divisions of economic activity in Spain, Greece, Portugal and Italy, and somewhat similar tables for Argentina and Peru which also relate the sectoral and occupational distributions to educational levels.

Parnes, Herbert S. "Assessing the Educational Needs of a Nation." in *Educational Planning*. ed. by Don Adams. Syracuse: Center for Development Education, Syracuse University, 1964.

Until social goals and objectives are identified, it is impossible to specify what amount and kinds of education are desirable or necessary. Even if the goals can be precisely set forth, they frequently cannot be translated into unambiguous educational requirements since the relation between means and ends are often not clear. Educational needs then cannot be evaluated except in the light of all the individual and social purposes which education must serve.

The formal educational system is only one of the media of education in the sense in which that term is used to define elementary, secondary, and university education. In educational planning,it must be recognized that some of the needs can and will be met by other institutions or processes. This is the obvious case for on-the-job training, apprenticeship arrangements, military training, etc.

The manpower approach to development recognizes that a nation with plans or aspirations for economic development cannot afford to slight the preparation of its human agents. The essence of the manpower approach to educational planning involves estimating the required additions to the labor force during the planning period of personnel with various occupational qualifications, and deciding for each occupational category what the appropriate educational qualifications are. This provides the basis for indicating the required outputs during the planning period for the several levels and branches of the educational system.

Although there is no set formula for making required estimates, several elements that are involved can be outlined as follows: 1) Estimate the size of the labor force for the forecast year; 2) Estimate total employment in each sector of the forecast year; 3) Convert the data on requirements by educational qualifications; 4) Compare the projected structure of the labor force by educational qualification of the existing structure; 5) Calculate replacement needs in each educational category resulting from deaths, retirement, net immigration, etc.;

6) Taking into consideration these rates, calculate the enrollments required in each level and branch of the educational system; 7) On the basis of required enrollments, calculate needs for additional teachers and educational facilities. (p. 56)

Manpower plans should not purport to be pure unconditional forecasts. They are not so much predictions of what will happen in the manpower field as indications of what must happen if certain targets for economic growth are to be realized. Manpower requirements then are not at all the same as the demand for labor. The pure manpower approach to assessing educational needs focuses exclusively on educational role in vocational preparation. The cultural approach, on the other hand, stresses education as a social investment to which returns cannot be calculated in money terms. The manpower approach and the cultural approach are not alternative approaches for arriving at the same measurement. The two approaches must be integrated in some proportion to "extrude" a comprehensive program.

A good general reference for educational planning, particularly the suggested outline for manpower planning.

Parnes, Herbert. Forecasting Educational Needs for Economic and Social Development. A Report prepared by the Organization for Economic Cooperation and Development, The Mediterranean Regional Project, Paris, 1962.

Forecasting manpower requirements over a 15- or 20-year period is generally necessary for educational planning because it takes about that long to create highly qualified manpower, such as scientists, engineers, etc. Manpower analysis for purposes of educational planning requires an occupational classification system, which can possibly be converted into corresponding categories of educational qualification. More detailed classification is needed for high-level occupations than for low-level.

Chapter II, "Estimating Future Manpower Requirements," is extremely pertinent. After distinguishing between the terms manpower requirements and demand for labor, it goes on to outline the steps in forecasting manpower requirements and supplies. As the first step it discusses in some length is the preparation of a manpower inventory in terms of data needs and data sources. After touching upon estimating the size of the labor for the forecast year, this chapter discusses techniques for forecasting total employment levels by branch of industry.

The ideal source for preparing a current manpower inventory is a current census of total employment, cross-classified by occupation and industry; occupation and educational qualification; and educational qualification and age. When the occupational forecasts are summarized, the result is an estimate of numbers of workers needed in each occupational category.

As a forerunner of the OECD Report, Methods and Statistical Needs for Educational Planning, this report stood out until the appearance of the latter as possibly the best volume on manpower planning methodology. Even now for someone who wants a less-detailed examination of methodology than is offered by the 1967 OECD publication, this report might be the most highly recommended.

Stanford Research Institute. Manual of Industrial Development. Prepared for Agency for International Development, Washington, D. C., June 1958. pp. 41-62; 65-78; 83-134.

Analyzing Resources
A resource is only so if it can be utilized to produce something. (cost factor) Specialized personnel are a resource.

Human Resources--Key Resource
Human talents can override material differences (Japan). Study supply of labor by skill and levels. Note present productivity--Compare with other countries. (See p. 69 for HRD outline.) Labor--Unskilled, skilled, technical, supervisory. Management--Entrepreneurship, managerial. Organizations--Business, education, stability, institutionalization. (Teach the teachers-multiplying effect)

Matching Industries to Demands and Resources
Information is needed on output (quantity, quality, market), input (materials, machinery, facilities, power, labor) and key locations of factories to match the above. See textbooks, research studies, industrial periodicals, equipment, manufactures, etc., for information.

Critical size--The scale of operation needed to be profitable. There is no such thing as a most efficient combination of a given process without regard to the relative prices of the factors used. (See p. 105 for table on wages as a percent to product value.)

Skill requirement of labor is a critical factor in matching industry to a developing area.

A good reference, in that it ties in the human resource needs as well as the physical needs. Written for the layman.

United Nations. Development Plans: Appraisal of Targets and Progress in Developing Countries. New York: United Nations, 1965.

Identifies scarcities in domestic resources (savings) available for investment, supplies of key commodities and trained manpower as chief deterrents to development. It is these three shortages that all plans hope to eliminate. Emphasizes need for balanced development between industry and agriculture.

United Nations. Processes and Problems of Industrialization in Underdeveloped Countries. New York: United Nations, 1955.

In the circumstances prevailing in underdeveloped areas, the raising of average levels of living is less a matter of affecting large increases in the incomes of the small minority than of insuring a steady, if smaller, increase in incomes of the majority. In most of the less developed countries, this majority is large and rural.

Diversion of underemployed rural labor to other occupations is urgent and required for development. Under such circumstances, secondary industry becomes an important means of development.

Despite the many difficulties faced by underdeveloped countries today, they have a notable advantage over those that were industrialized in the 18th and 19th Centuries. This advantage is found in the past knowledge and experiences that can be drawn from foreign countries. Government action to provide a more favorable atmosphere for industralization is primary to industrial growth. Recognition of the importance of industrial development demands recognition of the forces that tend to hamper or retard it. Industrialization is regarded as an urgent part of the wider process of economic development.

Industrial development cannot be disassociated from progress in the agricultural sector. Development of manufacturing industries cannot preclude the development of agriculture. They are mutually dependent. Feasibility of industrialization depends in part on the country's natural resources. The richer and more readily exploitable the more practicable is the withdrawl from agriculture likely to be.

The need to keep the economy more or less in step tends to slow down the process of industrialization; however, over rapid and unbalanced growth of the industrial sector not accompanied with changes in the agricultural sector may give rise to a phenomenon which in the long run likely will retard economic development.

In general, rapid industrial development under contemporary conditions is likely to be easier in countries with a low ratio of population to land and a low birth rate, than in countries with high population density and a high rate of population growth.

Secondary industry is emphasized as a means to reach the masses. Also, agricultural development must preceed industrial development.

United Nations. Department of Economic and Social Affairs. Demographic Aspects of Manpower Report 1: Sex and Age Patterns of Participation in Economic Activities. New York: United Nations, 1962.

This publication offers a fine description of concepts relevant to trends and variations in the economically active population, supplemented by a host of tables and graph pertaining to specific regions.

The conclusions of the study are interesting in their own right. It is stated that despite differences in the definitions of economically active population used for censuses and surveys in various countries, meaningful comparisons of data are possible.

The statistics on economically active males display patterns which are quite consistent. The cross-section analysis of data for countries at different stages of industrialization suggest the general trend that activity rates can be expected to follow in countries undergoing industrial development.

The statistics for economically active females are less satisfactory, particularly before extreme cases are eliminated. Historical studies provide no clear-cut answers to the question of whether the transition from a predominantly agricultural to an industrialized economy is likely to raise or lower the proportion of women who work. Much depends on conditions particular to each country.

United Nations. Department of Economic and Social Affairs. World Economic Survey, 1964. New York: United Nations, 1966.

The following are the most relevant tables in this, the seventeenth in a series of annual reviews of world economic conditions: indicators of the supply of trained manpower in 1960 for 32 developing countries; past and planned annual rates of GDP in a cross-section of developing countries; relation between annual rates of increase in countries; planned and past annual rates of increase in agricultural and industrial production for 22 developing countries; planned and past annual rates of growth in agricultural and manufacturing output; planned and past annual rates of growth in output of basic facilities and in output of construction and of mining industries; and planned annual rates of increase in population, labor force and non-agricultural employment.

U. S. Department of Labor, Employment Service. Demographic Techniques for Manpower Planning in Developing Countries. Washington, D. C.: Agency for International Development, 1966.

Until the gathering of statistics in developing countries becomes securely established as a continuous process and part of development planning, demographic forecasting will continue the use of simple arithmetic techniques involving for the most part multiplication and division calculations. This manual is one more of the many attempts to provide methods of demographic projection suitable in a less-developed setting. It may be the most elementary text on the subject, but this by no means reduces its value to the semi-professional manpower planner. In one sense it provides the manpower planner with a thorough and extensive checklist of different techniques whereby projections can be made. In this respect it serves to identify, define, classify and categorize such information. The planner can refer himself to the manual to assure that at least these techniques have been tried and are not ommitted in his calculations and analysis. In another sense it also describes thoroughly the particular tasks which have to be carried out in any specific operation and the methods to correct data deficiencies. However, the approach is conventional and thus lacks many more sophisticated concepts currently in use.

U. S. Department of Labor, Employment Service. Techniques for Determining Manpower Skill Needs and Training Requirements. Washington, D. C.: Agency for International Development, 1966.

This handbook was prepared to provide simplified techniques in the manpower field for use in developing countries. It covers methods for determining current skill needs and for establishing a continuing program of manpower reporting. The most useful presentations are those dealing with data sources, sectorial and occupational coverage and the collection and processing of raw data. These can serve as general guidelines for both manpower specialists as well as policy-makers concerned with manpower problems who may be able to better understand the manner in which conclusions in such projections are determined. However, the format is rigid, offering almost no alternative approaches. In many instances the directions call for data which may never have been available and then no suggestions are offered as to how such deficiencies may be overcome. Furthermore, no attempt is made to relate socio-economic factors in an integrated manner to the gathering and processing of data, preparation of plans and, most importantly, to the establishment of a continued program of manpower reporting. The assumption that once such a program exists "most of its deficiencies will be overcome through time..." reflects a certain lack of understanding on the part of the authors of the implementation procedure and evolution of programs in developing countries. Although methods may have been simplified, the approach in many respects shows little orientation to a developing setting.

U. S. Department of Labor, Bureau of Labor Statistics. The Forecasting of Manpower Requirements. Washington, D. C.: Agency for International Development, 1963.

This manual is perhaps one of the best, concise and simplified descriptions of the techniques involved in projecting manpower needs. Although based substantially on U. S. experience, ample modifications have been made to include problems of data unavailability. The provision of definitions, summary statements and numerous examples of format and calculation formulas give a clear and quite comprehensible survey of the main factors involved in manpower projection methodology. Perhaps the underlying concepts behind setting demand and supply needs could have been elaborated upon more extensively. But as a basic and elementary text it serves the purpose of conveying the essence of such techniques.

U. S. Department of Labor. Symposium on Forecasting of Manpower Requirements. Washington, D. C.: AID and U. S. Department of Labor, 1966.

A symposium of experts in manpower planning. This is a collection of papers with questions and answers of participants. Harbison presents his systems model and makes a strong plea for rural modernization. The other papers would be useful reading for one who understands the meaning of manpower planning "jargon" and economics. This collection of papers reflects an attitude of research for new and perhaps radically different concepts and procedures in planning.

III

AGRICULTURAL DEVELOPMENT, RURAL EDUCATION AND MANPOWER

Abbott, J. C. "The Role of Marketing in the Development of Backward Agricultural Economies." Journal of Farm Economics. Vol. XLIV, No. 2 (May 1962).

This short article addresses itself to the problem of providing economic incentives and marketing conditions that would increase productivity of the small farmer in the underdeveloped nations. Infrastructure projects, he feels, are not enough. He cites three basic conditions necessary for agricultural development:

1) Reasonably stable prices for agricultural products at a remunerative level.
2) Adequate marketing facilities.
3) Satisfactory system of land tenure.

Abbott suggest government action in the creation of an agricultural buffer organization, which would buy and sell surplus and short commodities to maintain stable prices. He also stresses the need for new organizations--e.g.,co-ops, agricultural extension, information training services. The article packed a good deal of information and concepts in a few pages. Worthwhile reading.

deVries, Egbert. The Balance between Agriculture and Industry in Economic Development. Cairo: Institute of National Planning, 1961.

Dr. deVries, in a well-reasoned and readable essay, underscores the need for a "balanced" approach to economic development. The professor argues that planners should devote ample resources to both Agriculture and Industry, so as to equalize per-capita income of the two sectors. This "balanced" approach takes cognizance of the two structural changes that are a result of economic development--transfer of population to non-agricultural professions, and the increasing amount of agricultural products to be marketed. If development is not balanced, there will be a demand, but insufficient production of agricultural products. Frustration will set in.

The professor suggests an investment of 40 percent annually in agriculture on the basis of a 2 percent per-capita income increase. The paper, as stated previously, is well reasoned. The importance of balanced growth underscores the inadequacy of the "incomplete or unbalanced" approaches. Current field experience indicates the balanced approach, especially in light of increasing urbanization and urban unrest. Industrialization alone is not the answer.

Johnston, Bruce F. and Southworth, Herman. "Agricultural Development: Problems and Issues." Agricultural Development and Economic Growth. Ithaca, N. Y.: Cornell University Press, 1967.

This article is the introductory chapter in a book on agricultural development. The essay stresses the interrelationships between agriculture and non-agricultural development, the areas of consensus and disagreement in the field today, some of the dilemmas of development, and the need for the problem-solving approach.

As an introduction to the field, the chapter serves a useful function. The authors do not push any one "theory," but intentionally supply critical appraisals of each chapter in the book. It is worthwhile reading.

Malassis, L. Economic Development and the Programming of Rural Education. Paris: UNESCO, 1966.

This brief booklet packs a lot of power. Malassis sets in perspective the relationships between education and rural development. He reviews briefly many of the current theoretical ideas of such men as Lewis, Schultz, Harbison, and others. He then sets out the needs for effective educational planning in the rural sector.

Most interesting is his model of the stages of educational development. He suggests a three-stage model, remaining initially the community-school concept for subsistance agriculture, towards the ultimate diminuation of agricultural studies as economic development increases.

Mellor, John W. The Economics of Agricultural Development. Ithaca, N. Y.: Cornell University Press, 1966.

The book examines three broad areas in agricultural development: the role of agriculture in economic development; the nature of traditional agriculture, and the modernization of agriculture. Mellor discusses current theory and practice, using many recent studies and experiences.

The bibliography at the end of each chapter is an excellent source for more detailed research.

Organization for Economic Cooperation and Development. Trained Manpower for Tomorrow's Agriculture. Paris: OECD, 1966.

This methodological book surveys the experiences of two European nations, France and Sweden, on agricultural education. The publication contains many tables and formulas for forecasting manpower needs, in which lie the book's principal value. These tables provide some development "tools" for the practitioner.

In the light of Operational field experience, there is little to apply from this book. The social, political, and economic conditions are so different as to make much of the OECD approach inapplicable.

Penny, D. H. and Zulkufli, M. "Estates and Small Holdings: An Economic Comparison." Journal of Farm Economics.(December 1963).

These two researchers attacked the "myth of fact" that estates are much more efficient than small holdings of subsistence farmers. They analyzed production and output patterns per hectare in an Indonesian rubber community. They concluded that "the arguments on behalf of the estate...are rather overstated." The article suggested four reasons for greater efficiency of the estates:

1) estates have sympathy of government
2) estates have monopoly of manpower
3) estates have ability to import cheap labor
4) estates have access to research information.

The article's methodology wasn't sufficiently explained or expanded to intelligently assess their results. But their conclusion seemed like an interesting proposition that could add great strength to arguments, classically built on humanitarian consideration for the development and promotion of small holdings rather than large ones.

IV

GENERAL EDUCATIONAL PLANNING AND PRIMARY EDUCATION

Anderson, C. Arnold. "Sociological Factors in the Demand for Education." Social Objectives in Educational Planning. Paris: OECD, 1967, pp. 31-49.

The substance of policies relating to demands for education is the topic of this article. An analysis is made of different measurements whereby demands for education may be assessed: utilization of educational facilities, comparisons of utilization within and among a number of nations over time and the distribution of children by grade over a time continuum to compare inequality of educational attainment with inequality in other aspects of living. The question then raised is how aspirations for education can be diffused to lead the largest proportion of qualified students to take advantage of the opportunities available to them. The author maintains that the more extended the base of education is, i.e., the larger the proportion of the population that is served, the wider becomes the scope for education to influence mobility selectively. He then provides a series of policy guidelines which tend to balance equity of opportunity with efficiency to provide such opportunity at the lowest possible costs. And although equity can be regarded as essential to and consistent with efficiency only in developed countries, societies at lower levels of development must be aware of means of controlling students' choices of careers by other than monetary incentives.

The significance of this article for the educational planner in a developmental context is to make him more aware of the manipulative powers he holds to shape and reformulate a society. It provided excellent insight into the implications of such planning.

Curle, Adam. Educational Strategy for Developing Countries. London: Tavistock Publications, 1966.

The difficulties encountered in educational planning for low-income countries hinge on a clear understanding of the context within which education exists, the priority it is afforded in society and especially the function it serves in development. Adam Curle's work clearly demonstrates the interdependence of education and economic growth. The product of education transforms society through the application of new concepts and techniques. By providing better and more educational opportunities,society gains the skilled manpower which can make the changes necessary for development to occur. These ideas have been repeated in numerous writings, However, the value of this volume lies in the enumeration and analysis of certain policies found in developing countries which often impede the implementation of rational strategies.

For example, graranteeing universal primary education in Latin America, refusing to employ foreign teachers for secondary schools in Africa and expanding university facilities which lead to an over-production of certain categories may seem incomprehensible to the educational planner from a developed country. The discussion of this type of "irrational" policy provides some indication of the attitudes and viewpoints which will influence the preparation, formulation and implementation of educational plans. The chapter on education, and in particular the section on primary schooling, is an adequate treatment of purpose and curriculum.

Davis, Russel. Planning Human Resource Development: Educational Models and Schemata. Chicago: Rand McNally and Company, 1966.

Once in a while a book will appear on a technical matter having a specific purpose and covering a multitude of related factors yet written in simple, clear and precise language. Such is the case with this volume. It provides a number of "educational models and schemata" designed for use in the planning of manpower development in low-income countries. Besides offering a host of techniques and alternative calculation methods for projecting demographic, enrollment, teacher staff data and linking these to the cost of educational programs, each section concentrates on the policies, strategies and means of implementation required to achieve certain development objectives. Perhaps the strongest conviction set forth by the author is that the "probable cost of education is a function of kind of education to be given." In accord with this stipulation, he elaborates extensively on the importance of relating school programs to their costs, the ways to determine future expenditures for recurrent, expanding and new programs, the methods of estimating changes in National Income and relating these to available revenues for educational purposes.

Although this book will have greater utility for those essentially interested in educational planning, certain sections are especially relevant to manpower projections. Pages 36-54 pertain to methodology for distributing and projecting the labor force by sector of economic activity and occupation. This same changer also contains an interesting section on the application of statistical techniques in human resource and productivity study.

Chapter 5 takes up "Models for Human Resource Development Planning." Although this chapter pertains more directly to the work of the educational planner--as one approach to planning the number entitled to demand education--the number that must be educated and trained in the work force, and the resources available for allocation to education and training, it also considers the use of certain models, based on linear programming techniques.

But the most useful quality of the book for educational planners is the manner in which the difference between reality and goals may be reduced and bridged. The guidelines laid out take full account of data deficiencies, implementation obstacles, shortages in capital resources and technical personnel. But sight is not lost of the fact that the final exercise in such planning still depends on a good measure of speculation. For this reason it is somewhat surprising that greater emphasis was not placed on alternatives which take into consideration major changes in population growth, migration patterns, investment, strategies of development and political stability.

Erder, Necat. "Some Administrative Problems in Educational Planning." Organizational Problems in Planning Educational Development. Paris: OECD, 1966. pp. 13-23.

One of the many problem areas confronting an educational planner is the administrative implementation of plans. For this there must be adequate preparation of those individuals responsible for carrying out the plan, operating and maintaining programs, assuring the allocation of necessary funds and, perhaps most important, continuously evaluating performance in light of planned targets. This article deals with the major decisions and administrative tasks which have to be made and performed to realize the objectives of an educational plan. The translation of skill requirements into educational categories involves certain choices between formal and other forms of training, types of institutions for producing skills, construction of new versus expansion of existing facilities, etc., which will necessitate constant dialogue between the educational planner and the various educational and related agencies. A thorough understanding of the decision-making machinery, the centers of power, the main sources of funds and other support, the distribution of responsibility for education and the formal and informal linkages between and among various departments will help the educational planner avoid working in a vacuum and in the end produce a more acceptable and realistic plan.

This article can be a useful reminder to educational planners who sometimes may get so bogged down in their individual calculations that they tend to lose sight of the context within which they operate and within which their plans will have to be implemented.

Ferrez, Gene. "Regional Inequalities in Educational Opportunities." Ability and Educational Opportunity by A. H. Halsey (ed.). Paris: OECD, 1961. Chapter 3.

The fact that educational opportunities vary from one region to another is one of the proofs that untapped reserves of abilities exist. To study regional inequalities in educational opportunity, the percentage of children of school age for a given level is studied.

In France the conclusion is reached that the rural factor is the most important factor and the one that seems most decisive in determining whether children continue their education. A further point to be noted is that in these areas the social factor tends to support the effect of the rural factor since the farming population is usually poor and its social status very modest. A secondary factor is that of distance between the child's home and the nearest secondary school, particularly if there is no transportation.

In France the decision was made to provide free transportation in order to increase enrollment at the secondary level. France is also in the process of expanding secondary educational facilities in the areas that have low attendance rates.

The regional disparity discussed is applicable to other systems.

Kehrer, Kenneth C. Human Resources Development Planning. AID Discussion Paper No. 15. Washington, D. C.: Agency for International Development, Office of Program Coordination, 1966.

Although the main subject of this discussion paper is the economics of education, there are a number of questions raised which deserve the attention of an educational planner. The relation between education planning models and the answer to specific questions reflect the complex interrelationships of an educational system can provide a framework for testing the consequences of alternative policies over time. The relationship between quantity and composition of additional skills needed during a planning period in order to substantiate target rates and patterns of economic development depend upon a clear and precise assessment of what an educational system can produce. Perhaps the most important question is: What precisely does an increment in education change in society? The paper provides no easy solutions nor does it extrapolate from the analysis policy guidelines which can serve as guideposts to the planner. But the recognition of such complex problems indicates the orientation manpower and educational planners must direct themselves to in order to make their statistical calculations more meaningful in the process of planning for development.

Lave, Roy E., Jr., and Kyle, Donald W. "The Application of Systems Analysis to Educational Planning." Comparative Education Review, Vol. XI, No. 1 (February 1968), pp. 39-56.

Systems analysis is an interdisciplinary approach that can provide the planner with powerful analytical tools to aid his decisions. It is the integration of complex factors into an analytical framework that aids practical decisions. The complexity of education programming decisions are summarized by the following characteristics: 1) highly diversified investment choices; 2) complex interrelationships; 3) long time periods; 4) highly dynamic uncertain environment; and 5) measurement problems. (p. 41)

Any proposed education plan or policy evidently must be judged and evaluated by the impact that it makes upon society. Thus, education plans and policies must begin by considering the society's characteristics, goals, values, and resources. Systems analysis can aid in making the decision by showing how resources would be used in different sectors, but a realistic appraisal of the way in which such decisions are made identifies only a small role for analysis. For example, the choice of media which involves significant economic consideration is and should be the subject of analysis; however, choices of how it is to be used in the curriculum or lesson plans are not amendable to systems analysis. Analysis cannot be conducted in a vacuum.

The practical situation must be considered when selecting methodology to guide the making of decisions. Systemsanalysis provides a testing ground for socio-economic system makers. It allows the educational decision-maker to test and examine internal programson paper before committing himself to specific programs.

Systems analysis can be viewed as having nine steps. They do not necessarily occur in the same order nor are they necessarily performed independently. 1) Determining the goals of educational planning; 2) Determining the scope of the planning problem; 3) Determining an objective function; 4) Identifying the most useful conceptual framework; 5) Constructing the analysis model; 6) Developing the measurement model; 7) Testing the models; 8) Evaluating alternative solutions; 9) Implementing the decisions. (pp. 51-52)

This framework is probably too sophisticated for use in developing countries. The reliability, for example, of linear difference equations expressing stock of grade levels would be questionable.

Lewis, W. Arthur. "The Strategy of Educational Development in Relation to Economic Growth of Underdeveloped Countries." Policy Conference on Economic Growth and Investment in Education. Vol. II "Priorities for Educational Expansion." Paris: OECD, 1961. 20 pp.

Lewis confines himself here to a broad discussion of the absorptive capacity of an economy for educated citizens, and "mountain-top" discusssions of primary, secondary, adult and university education.

He speaks to the political problems created by an oversupply of educated persons and indicates that salary scales will tend to adjust in the long run--but that long run may be quite long. The graduate will sooner or later be forced to accept a lower salary. Before this occurs, the disparities in salaries created by status and education may promote "revaluation."

His discussion of the branches of education emphasize the basic necessity for each type and samples of methodology to judge how many should be trained at each level to maintain the economy at a stable rate. He emphasized linkages between the levels of education and warns of over-supplies created when one level produces many more graduates than the next can accept.

He argues for adult in-training education as the quickest way to obtain results in your labor force. His university position is that overseas education for the students will remain the most economic, since that country--where the student goes to school--shoulders most of the financial burden of the education as opposed to the home country's inefficient provisions for similar education.

The costs of education are also emphasized in relation to average per-capita income. Since education in poor countries guarantees a salary of a higher multiple of per-capita income, it is more expensive for a poor country to absorb the educated. In the United States, the basically educated receive less than average per-capita income.

Read for an understanding of the criteria that affect the selection of priority levels of education in underdeveloped countries. Note especially the limitations of primary education.

Organization for Economic Cooperation and Development. Methods and Statistical Needs for Educational Planning. Paris: OECD, 1966.

A handbook of imposing size that is an "attempt to set out systematically the statistical implications of recent developments in the theory and practice of educational planning. If one were going abroad to work on a job even remotely connected with educational planning, this would be one of the first books to be packed. Contains forms for enumeration, models, etc., that might not be exactly applicable, but would suggest the nature of the job at hand and ways to handle it.

Parnes, Herbert S. The Integration of Human Resources and Educational Planning. Washington, D. C.: Unit of Technology and Productivity, Pan American Union, 1965.

Perhaps one belabors the point when stressing the interrelations between manpower and educational planning; but when they include cultural factors, the authors of such ideas should at least be heard out. This work attempts to establish criteria in terms of which educational needs are to be defined and in deciding upon the amount and type of education appropriate for achievement of each. The term "cultural approach" is used to emphasize that such assessment involves a social investment, the returns of which cannot be calculated in monetary units. However, the author cannot translate his ideas into operational utility and hence much of the speculation, though commendable, loses practical applicability for the planner.

Poignant, Raymond. "The Role of Educational Plans in Economic and Social Development." Organizational Problems in Planning Educational Development. Paris: OECD, 1966. pp. 23-35.

This article describes and analyzes the main linkages between plans for economic and social development and planning for education. Educational planning determines the resources that will be used by authorities for the purpose of education over a given period and the needs (facilities and teacher staff) which correspond to targets and forecasts for the various levels of educational enrollment. The continued economic and social development of nations will be secured as a result of "earlier plans for educational development...." The forecasting of required extra numbers of enrollments should take account of qualitative improvements and such factors ad migration, replacement of facilities, population trends, social demand for education and government policies. The article is an excellent review of this subject but only to the extent of its coverage. In many respects, the outlook is too limited and in some instances the emphasis is on factors of secondary importance in the scheme of development. For example, the author states that the planning of economic and social development "is a simple matter of trying to determine the possible or desirable development of the economic and social system...." The underlying purpose of this signifiea change which is completely ignored. Also, the author explicitly excludes from the aim of educational plans any attempts to define the ultimate goal of an educational system.

Vaisey, John. "Priorities within Education." Education and Development of Nations. John W. Hanson and Cole S. Brembeck, eds. New York: Holt, Rinehart, and Winston, 1966.

It is unfortunate how often some authors isolate a number of problems for analysis and then generalize these for an entire field of study or specialization. The lack of systematic, comprehensive analysis within a social-system framework can lead to fragmentation, oversight, exaggeration and, in planning, completely unrealistic and infeasible blueprints. This article unfortunately suffers from such abuses. It is particularly unsatisfactory since the subject is crucial to the planning of education. Only three problem areas are scrutinized and no attempt is made to integrate these three and balance of educational investment, structural influences and teacher supply, to the overall objectives of education nor to development per se. Although the problems chosen are more or less adequately dealt with, very little attention is given to the implications these have for planning education or for policy-makers. However, it is not appropriate merely to criticize; such luxury is predicated on the responsibility to at least offer remedial action or alternatives.

V

SECONDARY EDUCATION AND MID-LEVEL MANPOWER

Adler, J. H. "Plans, Projects and Priorities." Finance and Development. Washington, D. C.: IMF-IBRD Quarterly Publication, September 1964, pp. 74-80.

Two key questions: Where are we now?
Where shall we go from here?

Perhaps the most important service that planning renders is that it contributes to the decision-making process by distinguishing those issues on which decision must be made and those issues on which decisions may be delayed. (p. 75)

"Indicative Planning"--Two-way street; planners tell the private sector what they expect them to do, and the private sector tells the planners what their intentions are. (p. 77)

The assignment of priorities is particularly applicable to public services when funds are limited.(p. 79)

Read for specific information on setting priorities.

Brolin. "Statistics Needed for Educational Planning." Economic and Social Aspects of Educational Planning. Paris: UNESCO, 1964. Chapter X, pp. 223-242.

Statistical data furnishes not only quantitative measures, but it can also lead to qualitative decisions. Whatever the schemes for structuring statistical inquiries, they must take into consideration the local situation. Much of the data collected will not be educational statistics in the "narrow sense," but the educational planner cannot work in a vacuum; he must take into account all relevant factors.

Educational planning in the less-developed countries, at least for the time being, has to be carried out with grossly insufficient statistical resources. No single standard scheme can be proposed for the choice and treatment of statistical data that would be suitable for all types and purposes of educational planning.

Not a very specific reference on the types of statistics to use; however, it is a good general reference in regard to the collection of any type of statistical data.

Diez-Hochleitner, R. "Educational Planning." Economic and Social Aspects of Educational Planning. Amsterdam: Ysel Press, Ltd., (ed. by UNESCO), Chapter 4, 85-97.

The author says at the beginning that participation of the economist in educational planning is a significant development, and that the interdisciplinary approach to educational problems is the most valid method. He also covered in general the nature and scope of planning, its organizational aspects, and the problems of expansion and improvement.

In the section, Education and Training: problems of expansion and improvement (89-92), the disproportionate realities of some educational plans were discussed. Questions relating to internal performance, rural-urban double standards, bottlenecks--including static curriculum--and adult education are raised. Six priorities within education which would apply to most developing areas are listed.

The Administration and Finance section (93-94) holds that education is one of the most important aspects of development, yet it does not attract highly qualified personnel. After mentioning some of the political realities of ministries, he maintains that programs are not well developed and more interest should be maintained in outside financing (take more advantage of it).

The developing countries should limit the expansion of primary education at least to the rate at which teachers can be properly trained and adequate facilities provided. The most urgent task in underdeveloped countries is to diversify secondary level education in terms of distribution of enrollment by branches, and adjusting the curriculum to the present ant future manpower needs. Technical education should be flexible and based on a wide general education. Adult education should reach the illiterates, be devoted to training and retraining for new skills, and more advanced extension courses.

Use this reference particularly for its suggestions relating to the need to approach planning from a multi-disciplinary basis. It is also especially specific about the importance of secondary education and the structuring of technical education programs.

Ewing, Claude H. "Skilled Manpower Training to Support Industrial Growth in a Developing Nation." in U. S. Department of State Human Resources: Training of Scientific and Technical Personnel (Science, Technology, and Development). Washington, D. C.: Superintendent of Documents, Vol. XI.

This is a report of the techniques which proved effective and some which did not prove effective in the implementation of a vocational education project in Thailand.

A question to consider in planning a program for training skilled workmen is whether to transplant procedures developed elsewhere or whether to develop procedures based upon locally available materials and personnel. Either course presents difficulties. Another question to ask is whether to train specialists or generalists.

Thailand has a six-year economic development plan which consists of development efforts only in the public sector which have already been undertaken by government agencies. The plan emphasized agricultural development.

A total of 19 training centers were established in locations selected by the Ministry of Education. A general survey was made to determine where specific areas of training should be taught. For example, in up-country Thailand, courses were made general and occupations grouped in order to develop general mechanics.

The teachers were found to have a limited amount of technical training and only a few had practical experience in the occupations that they taught. There was no aversion to working with their hands. A teacher-training center for improving teachers' skills was established with dormitory space. Teachers were also taught to work with instructional materials and visual aids. Training courses ran for a period of seven months full time. In the opinion of the American technicians, the best money spent in the program was on third-country training.

The cost of equipment per student work station was approximately $400. Because of a lack of exposure on the part of the students to machine tools, interest inventories and mechanical aptitude tests were not used for selection. Selection was made, rather, on the basis of texts in mathematics and science. The latter utilized drawings which would indicate mechanical aptitude.

Each school, through newly established guidance facilities, was encouraged to make a community survey. The survey included the numbers and types of jobs that were available locally for the graduates.

A typical progress report was made by a person involved in the implementation process. The community-survey ideas are interesting as a fast and inexpensive method of setting broad goals.

Harbison, Frederick. Educational Planning and Human Resource Development.
Paris: UNESCO, 1967.

Harbison is a professor of economics with wide experience in human-resource development in emergent countries and does not write from the point of view of any special discipline. There is widespread disagreement as to what constitutes a factual base for planning. Some planners insist on rather voluminous statistics to establish the factual base for a plan, and others would plan almost without facts.

Whether facts are employed to a great degree or not, educational planning involves: 1) the setting of targets which are to govern subsequent actions, 2) selecting priorities that involve levels of education, choices between quality and quantity, science and technology versus the liberal arts, formal education versus non-formal training, structuring incentives and defining the purposes of education.

Non-formal training often demonstrates a number of advantages over formal education. Secondary vocational schools are a poor investment in most developing countries. It is more advantageous to provide potential craftsmen with general secondary education and then develop their skill on the job. Secondary education then should be comprehensive and should aim at producing trainable people, while the task of developing specific skills should be the responsibility of employers.

Several South American countries have a system of training related to employment in industry which is financed by a payroll tax on all employers. SENAI in Brazil is one such organization. The balance of choice between pre-employment vocational education and training on the job is struck differently in different countries.

Poor salary and status of what should be middle-level occupations hampers entry in the developing countries. There is a need to provide incentives to get people to enter them. Study of incentives is an integral and indispensable part of educational planning. Any realistic plan must give full attention to incentives.

The first conclusion is that the building of strategy is certainly not a process of getting accurate statistics. Judgment is employed to identify critical problems involving human-resource development, and this can be done with very meagre statistical information. Good statistical information, however, adds to the basis for the plan. The second conclusion is that some critical problems in education can be solved by increasing the output of educational institutions. This must be qualified, however, by saying that some critical problems in education. The third conclusion is that of incentives, and the last conclusion is that the educational planner must be more versed in the techniques and objectives of general social and economic development planning.

Manpower analysis is a new and evolving art; its methodology is neither orthodox nor rigid. The manpower approach goes far beyond the construction of pure quantitative forecasts, projections, or targets. It should be related to a broad strategy of human-resource development rather than to a narrow concept of educational planning. Manpower and educational planning should be related to national development, a term which encompasses economic, cultural, social and political development in the building of national identity and integrity.

The systems analysis approach has been successfully employed as a tool of manpower planning. Major human-resource problems in developing societies are: a) rapidly growing population; b) mounting unemployment in the modern sectors of the economy as well as widespread underemployment in traditional agriculture; c) shortages of persons with critical skills and knowledge; d) inadequate or underdeveloped organizations and institutions for mobilizing human effort; and e) lack of incentives for persons to engage in certain kinds of activities which are vitally important for national development. (p. 26)

Harbison argues for informal O-J-T over formal vocational education. See also for ideas regarding incentives.

Katz, Saul M. A Systems Approach to Development Administration. Comparative Administration Group, American Society for Public Administration, pp. 29-39.

Government Organizations for Development

Government organizations are the major means of integrating and carrying on the development planning process. Where both the government and the private sector are involved, some plurality of opinion causes critical problems of coordination. A development action system varies from an organization in that the organization is more comprehensive than the former, and it is more stable.

Organization is a pattern of communication. The organization is the vehicle for integrating sub-systems into a working whole. The environment of the organization is dependent upon the motivations and group perceptions within it. External forces may affect the internal organization only in so far as there are stored concepts that will permit change. The organization must institutionalize (i.e., involve and represent emotions and group aspirations) if it is to exist.

Government Planning Organization

(1) Central planning organization--Administered directly by the national government; it has a permanent staff, formulates, implements, and evaluates plans.

(2) Autonomous planning organization--Regional government, independent of central government.

See for ideas regarding the institutionalizing of the planning process.

Krebs, William A. "The Strategy of Industrial Development." Industrial Development, U. N. Conference on the Application of Science and Technology for the Benefit of the Less-Developed Areas. Vol. IV, pp. 12-21.

Strategies specially designed for the industrial sector must be a part of each country's plan for economic development. The key institutional element in successful industrial-development strategy is a central executive organization having high professional competence and political power. Such a center has symbolic importance inside and outside its country. This demonstrates that the country is serious about its industrial development.

The central organization acts as an advisor to the government on a wide variety of important policy questions affecting industrial development including taxation, labor laws, education, and financial policy. The center should be a center for information of interest and potential investment in industry. It involves maintaining adequate statistics and a library of reference materials and carrying on research to obtain information not readily available.

Along with a strong central organization for industrialization, there must be clustered around it a range of ancillary specialized institutions. They include development banks, technical-assistance institutes, industrial development consulting centers, and managed industrial districts.

The technical-assistance institute ideally will provide at least the following services of a high level of skill and a low level of cost relative to value: management council, product and process development, market research, technical trouble-shooting, and applied research and development. It must be organized so as to give it substantial independence of government at the earliest possible date.

Krebs argues for centralized administration for the development of industry. This may or may not be the answer to coordinating efforts. It is somewhat overworked in Latin America and depends greatly on the local administrative atmosphere.

Mushkin, Selma. "Financing Secondary School Expansion." in Financing of Education for Economic Growth. Lucille Reifman (ed.) Paris: OECD, 1966, Chapter 14.

Growth in educational outlays proportionate to GNP is assumed to require no change in the revenue structure. The question must be asked, however, as to how tax collections respond to economic growth: Tax systems that rely heavily on taxation of profits and on progressive income taxes will produce revenue increases proportionately larger than the growth in GNP.

The tax system that relies on flat per-capita levies or specific levies on any inelastic consumption item, such as tobacco, will produce considerably less revenue changes that may be indicated by the GNP. GNP elasticity of a tax structure depends upon a large number of factors, including the following: 1) overall composition of the tax structure; 2) the distribution of tax collections; 3) definitions of tax bases; 4) taxpayer compliance with various types of taxes; 5) responsiveness of tax base to change in national produce and income. (p. 270)

National economic objectives require assessment of the nation's manpower potential and concomitant training obligations. Most nations strive for equality in educational opportunity. A centralized system of financing and administration loses much of the flexibility of a decentralized system which permits local interest and direction. Secondary education will be expanded by increasing enrollment or by improving quality. Financing the expansion would be calculated on a per-student basis for quantity expansion and on the basis of standards for quality expansion.

Regional disparities can be measured by: 1) expenditures per pupil; 2) enrollment ration; 3) size of classes; and 4) percentage of first-year students graduating. (p. 284)

See for a good argument for decentralizing the administration of the public-school system. See also for the types of taxes that are the most beneficial to education.

Neff, Kenneth L. Education and the Development of Human Technology. Washington, D. C.: U. S. Government Printing Office, 1962.

The absence of social technology may be a block in promoting economic development through foreign assistance. Without an understanding of social processes, planned development that creates a planned change may meet public resistance when evidence of cultural change arises.

Education is an indispensible requisite of development and economic growth. Within the scope of education, literacy and vocational training play an important role. The question is not whether literacy is essential, but how much. Relevant reading materials must accompany literacy programs for the retention of skills.

Graduetes from technical or vocational schools must be prepared so that they are trainable, not trained.

Reinforces the idea that the social aspects of educational planning must be stressed equally with the development of technology.

Parnes, Herbert S. "Relation of Occupation to Educational Qualification." Planning Education for Economic and Social Development. Paris: OECD, 1963. Chapter 15.

Question: If occupational structure of the labor force is known for some future date, what is the required distribution of the labor force by level and type of education and training?

Occupations are not homogeneous with respect to the required patterns of skill and knowledge. There are several alternatives as to how the skills and knowledge may be acquired for a given occupation. Only in a limited number of occupations, most of which involve some kind of legal certification, are the educational requirements static. The medical and teaching professions are examples.

A technique for determining required levels of education for general categories of occupations is to study the background of those persons currently employed in such occupations. However, even within relatively specific occupations, there is a wide range of jobs that differ considerably in their demands for the amount of education and training needed.

Individual differences and native ability also vary in this context. Inherent ability and desire to achieve may in some instances be a substitute for formal education. There may be merit in grouping occupations to be as homogeneous as possible with respect to educational qualifications, but in most cases this will represent a range of educational qualifications rather than any specific level or kind.

The problem of converting occupational forecasts into estimates of the number of persons with various educational qualifications turns out to be one of estimating the proportion of each occupational category who should be expected to have each level and type of education.

An attempt was made by the U. S. Bureau of Employment Security to code a sample of 4,000 jobs taken from the DOT according to general educational development and specific vocational preparation required by each. Specific vocational preparation was subdivided into three categories: 1) reasoning development; 2) mathematical development; and 3) language development. (This is not a complete approach but seems to have some promise.)

An excellent reference regarding the assignment of levels of education to occupational classifications. See also for the general instructional categories needed for vocational preparation.

Tinbergen, Jan. "Educational Assessment." Economic and Social Aspects of Educational Planning. Paris: UNESCO, 1964, Chapter 9.

The educational system serves several purposes. For educational planning, two seem to be outstanding. The first may be called the provision of general cultural basis, and the second the provision of more specific skills needed for the proper performance of a number of occupations.

The first type of education provides the basis service or acts as an infrastructure to many social, economic, and cultural activities. Primary education may be considered part of the infrastructure. School-leaving age of compulsory education tends to rise as the country is developed. Estimating the numbers of pupils in compulsory systems tends to be a demographic problem only. It consists of estimating the numbers of children of school-going age for all ages within the legal span of years and to repeat this calculation for each year of the planning period. Once the numbers of pupils have been determined in the relevant age goups, the next problem is to tackle the question of translating this need into numbers of schools and numbers of teachers. Another step is to estimate the numbers of teacher-trainers that would be needed to prepare the teaching staff.

Formal education usually tries to develop a somewhat more general type of skill, whereas, informal education or training concentrates on the more specific skills for precisely defined occupations. Rapid changes in technology consequently change the specific skills needed in the more precisely defined occupations, which, in turn, results in a need to restructure informal training courses more frequently. Planning activities for this type of education rest on the relationship between future production volumes and the stock of manpower of various types needed for it.

Manpower planning is used as a step in educational planning. Educational planning usually starts with the assumption that the stock of manpower in various categories needed in production is related to the volume of production in one or more sectors, e.g., the number of bricklayers is dependent upon the volume of building. The main sources of general information about manpower are censuses of population and of occupations.

Occupational sectors are first identified for the manpower plan. In the one-digit classification, broad occupations are listed such as building, mining, transportation, manufacturing, etc. The various occupations and sectors are then subdivided according to educational characteristics. In the educational plan, examples would be as follows: 1) one-digit classification--technical and sciences education; 2) two-digit classification--technical education, university level; 3) three-digit classification--technical physics, electro-technics, chemistry, etc. (p. 187)

As a rule, occupations can be entered by people with different educational backgrounds. Procedure in the planning process is elastic and the practical situation will dictate the steps that must be taken to compile a comprehensive plan.

See for digital classification of occupations.

United Nations Economic Commission for Asia and the Far East. Economic Bulletin for Asia and the Far East. Vol. XIV, No. 2, September 1963, pp. 37-51.

"Educational planning" is understood to refer to an activity which takes place within the framework of general development planning. The plan does not infer administrative or technical procedure, but rather the quantitative and qualitative targets to be reached.

Cooperation of all sectors of a society and the use of available research is necessary to do effective educational planning. The national government must be the responsible organization for the planning function with outside agencies acting in an advisory capacity only.

The preparation of an educational plan includes: 1) definition of objectives; 2) formulated goals of development; 3) programs outlined that will secure goals; 4) defined priorities.

Read to understand the relationship of the educational plan to the total national plan for development. It also explains the difference between planning and implementation.

Vaizey, John. "Some of the Main Issues in the Strategy of Educational Supply." Policy Conference on Economic Growth and Investment in Education. Washington, 16-20 October 1961. Paris: OECD, 1965, Part III, pp. 51-71.

"The supply of specialists and skilled manpower is mainly a question of education." Education has two influences--supply of skilled manpower, and a subtle persuading influence on attitudes towards progress by society.

Underdeveloped countries tend to have these things in common: Low per-capita income; overpopulated in relation to employment opportunities; predominantly agricultural; shortage of foreign exchange; etc. Things in common in education are: Large portion of population are children; few in school; shortage of qualified teachers; poor materials and programs.

In the structure of education, it is important to strike the proper balance between various sectors of education. Technical education should not be offered separately from academic education according to this author.

See particularly for commentary on the need to plan comprehensive educational programs to meet both of the "influential" responsibilities of education, i.e., do not overstress manpower development at the expense of attitudinal development.

VI

TERTIARY EDUCATION AND HIGH-LEVEL MANPOWER

Bombach, Gottfried. "Long-Term Requirements for Qualified Manpower in Rleation to Economic Growth." Economic Aspects of Higher Education. Paris: OECD, 1964, pp. 201-221.

1. The writer stipulates that the main purpose of the manpower requirement projections is "to avoid structural disequilibria, i.e., serious bottlenecks in one field and over-supply in another." It is implied that we do not need overall projections of manpower requirements and projections by type of skill because there is no danger of over-education, and that we should simply promote education to the extent the available resources of the society can afford. But, especially in the developing countries where the resources to be invested in education are too limited to meet rising expectations and the absorbtive capacity of educated manpower is low, "the-more-the-better-like" educational policy seems to be very dangerous. Perhaps one must constantly remember that the paper is written for the member countries of OECD which are economically and industrially advanced. The uncertainty of the future occupational structure and the "serial career" of individuals may lead us to give up projections by type of skill, but we should not abandon our efforts to seek more reliable methods to predict occupational structure and the inter-occupational flows of manpower, if we are to reduce the structural disequilibria of manpower.

2. The main components of demand for educated manpower are described under three categories. The first is the public sector (public consumption) where manpower requirements are almost entirely determined by governmental programs and intentions, and so it is usually impossible to use econometric methods of projection. The second is the household sector (private consumption) in which demand for manpower is largely determined by the level of economic well-being. Lastly, the economic sector incorporates the most potent demand for manpower, and this conventionally has been the major topic of manpower planners. The author's enlarged concept of demand for manpower provides a comprehensive outlook to those who have tried to project the demand solely in terms of the economic sector. However, we still have great difficulties in the methodology of projecting manpower demand for the first and second sectors.

3. The practical and conceptual limitations in the direct methods of manpower projections such as trend extrapolation and regression analysis are examined in the paper. The main criticism is that the direct methods depend on the past trend and pattern which we are trying to change, and that, in the case of long-term projections, the projected estimates go beyond the ceiling points to the extent that it is conceptually and empirically inconceivable. The author presents three steps of projection:

1) A translation of the target for aggregate growth into structural trends. 2) Estimation of labor productivity development, in order to derive the total manpower increase sufficient to meet growth objectives. 3) Analysis of the substitution process and evaluation of the manpower trend within the sector. In this process, international cross-section analysis is strongly recommended as an important analytical tool for improving projections. But it is well recognized that international comparisons also have great limitations which are implied by the facts of cultural diversity among countries and the concept of"multilinear evolution" of societies.

Emmerij, Louis J. and Thias, Hans H. "Projecting Manpower Requirements by Occupation." Lectures and Methodological Essays on Educational Planning. Paris: OECD, 1964, pp. 149-172.

The paper deals with the methods of occupational projection which constitute one step in the series of operations constituting the educational planning process. The discussions center on the methodological problems which arose in the Mediterranean Regional Project (MRP).

In the first section of the paper, occupational classification problems are discussed subject to the proposition that the occupational categories selected should be not only meaningful for economic development purposes but also easily convertible into educational requirements for development. The problems of applying of ISCO and MRP Classification to the special situations of two countries, Spain and Italy, are examined.

In the second part of the paper, three techniques for projecting manpower requirements by occupation-trend, international, and inter-firm comparisons are presented. The basic assumptions, conditions for use, main variables involved, and funadmental procedures of each technique are analyzed. To improve the occupational projections techniques, it is recommended to experiment with more complicated techniques such as multiple regression and non-linear methods in dealing with the chosen variables of different sectors of the same country, of one sector in different countries, and of different firms in one sector.

In the last section, the projection techniques presented are critically analyzed. It is intoned that, since trend projections are made a function of time without knowing the determinant factors of manpower requirements, usefulness is limited especially in long-term projections and in the case of developing countries where the targets in economic and educational sectors are set up to break with past trends. But international and inter-firm comparisons tend to shift the emphasis from the time element to explanatory variables such as productivity of labor, size of the firm, etc. Comparisons also are based upon an unsound assumption that a firm, sector or country should follow one path of development.

Contemporary projections of occupational structure have been basically limited to linking the economic sector with the educational sector. However, we should try to find the common denominator of both sectors in other ways. One promising way is to define behavioral characteristics which are fundamentally required and expected to be required in each occupation, and to classify the labor force in the behavioral terms. To do this, we need to apply a knowledge of modern psychology and the more elaborate analytical methods of job analysis, for one.

Fortier-Ortiz, Adolfo. "A Report to the Trustees of the College Entrance Examination Board: Problems of University Admissions in Latin America." New York: CEEB, 1963. 28 pp.

The concluding remarks of this articule recommend the establishment of Scholastic Aptitude Testing and College Board Entrance Examination. The discussion prior to these recommendations serves as a good introduction to some of the problems which secondary and higher education face in Latin America.

A general discussion of admission systems to higher education points out general problems such as: the vertical structure of faculties, the lack of an interdisciplinary nature in Latin American education, the professional student, the part-time professors and students, the extra year of preparation needed, and admission by certificate alone.

With reference to Brazil, the "hidden school system" (the extra year of school needed to pass the entrance exam) is discussed along with the problem of having to take the entrance exam for one faculty only. Three solutions to Brazil's problem are presented: 1) adapt the last year of secondary education to the exam; 2) create a preparatory year in the university; and 3) make the competitive exam general so it will classify and place the takers.

Mardin, Serif. "Social Factors Affecting Educational Reforms." Lectures and Methodological Essays on Educational Planning. Paris: OECD, 1964, pp. 55-66.

It is well recognized that if educational reforms are to be implemented successfully, social factors should be fully considered in the planning and implementation of the reform. This recognition usually comes as the response to the one-sided consideration of economic and quantitative variables in the formulation and implementation of an educational plan. This paper is no exception.

On the basis of his experiences in the Turkish MRP, Mardin calls our attention to the concept of "social demand" in educational planning. He defines the concept under three categories: 1) the physical framework of a particular society, 2) the official educational ideology, and

3) the opinions of various sectors of the community. Then, the concept of social demand is applied to analyzing the failure of village institutions. The most interesting facet is his analysis of the social demand of different sectors of the community for education. Using Lerner's concept of three different human types in a society undergoing modernization, he analyzes three social classes in Turkey separately.

This paper provides an analytical framework for the study of social forces affecting educational development. What remains before us is to explore further the social forces in order to develop the concept of social demand and to define the relationship of social demand to educational change.

Organization for Economic Cooperation and Development. Training of and Demand for High-Level Scientific and Technical Personnel in Canada. Paris: OECD, 1966.

The training of high-level scientific and technical personnel is an essential requirement for promoting the industrialization process of a society. It is a generally accepted and empirically tested principle that the development of scientific knowledge and technical skill is closely related to technological progress and economic growth. Probably under this assumption, the OECD conducted a series of studies to review national policies for science and education of its member countries. This is one of the reviews.

The first part is composed of the observations of a team of examiners which raises questions for the subsequent discussions at a confrontation meeting. The report of the confrontation meeting, composed of the examiners and the delegates from Canada, constitutes the second part of the book. The major topic of study is the rapid expansion of higher education which is taking place in Canada and the problems thereby created.

They discuss the demographic, economic, and organizational background of Canadian higher education and the migration problem of professional manpower; the major factors influencing the expansion of higher education and the problems of making adequate provision for the increasing demand for higher education; and the relationship of the expected educational output to scientific and technological manpower needs.

In this study, the problems of the quality of scientific and technical education, the educational function of informal instutions, and manpower requirements by occupation are paid little attention.

Shearer, John C. Intra- and International Movements of High-Level Human Resources. Preliminary Draft, December 1965.

According to Dr. Shearer, heavy movements of people to the capitals and larger cities of a country constitute a heavy subsidy of the richer by the poorer areas. The area of birth usually bears the cost of rearing and education of future migrants and many of the direct costs of migrating. A large proportion of those who migrate do so near the beginning of their most productive years.

Yet of even more critical importance is the fact that such migrations contain disproportionately heavy concentrations of high-level human resources. Dr. Shearer concludes by saying "that these movements are both caused by and contribute to the great and increasing disparities in wealth and opportunities between the capital and the poorer areas."

Stone, Donald C. "Guidelines for Training Development Administrators." Journal of Local Administration Overseas. Vol. V, No. 4, October 1966, pp. 229-242.

In his article Dr. Stone analyzes the major problems of an educational program for development administrators in the United States and the other developed and developing countries and develops general guidelines.

First, he examines the tasks and processes of development, the administrative obstacles to development, and educational activities in the United States and other countries. The analyses of the first two items provide the basis on which the educational objectives of administrative training centers should be formulated, although the writer does not directly suggest this. His examinations of educational precedents for administrative training institutions in a variety of countries bring to light the ineffective practices of organizations for different patterns of public-administration education.

Although categories of personnel who should be taught are exhaustively illustrated in the projections of requirements for different manpower categories are extolled in general terms, it is unfortunate that important problems, such as the procedures for recruiting administrators and methods to be employed for forecasting administrative manpower requirements, are not dealt with. It is emphasized that, in determining what should be taught, the practical methods and theoretical knowledge of development, comparative studies of the problems of cross-cultural adaptation, and a multidisciplinary approach are important aspects. Other educational arrangements for training administrators are suggested: Incorporation of the subjects of development problems into secondary school and university curricula; creation of undergraduate and postgraduate public-administration programs with emphasis on development; long- or short-term in-service training programs, pre- or in-service personnel assignment to academic or non-academic programs in development administration fields; and so on.

VII

EDUCATIONAL ADMINISTRATION AND "THE ECONOMICS OF EDUCATION"

Bowman, Mary Jean. "The Costing of Human-Resource Development." The Economics of Education. ed. by E. A. G. Robinson and J. E. Vaizey. New York: St. Martin's Press, 1966. Chapter 14, pp. 421-450.

This paper argues for the utilization of a general concept of opportunity costs. Through the identification of six important dimensions (who bears the costs, scale units of measure, potential transferability, the time dimension of the foregone opportunities, the dimension of opportunity perception, and assumed institutional restraints), the author attempts to operationalize this concept.

She approaches the input versus foregone argument from three angles.

1) If there are to be any standardized real cost units, they cannot rely on what is put in. The value of a unit of labor is not generally definable at this point, but that unit of labor is definable assuming choice of the best alternative choice. This then can be used to determine the real cost of doing something else.

2) The money wages which a worker receives may or may not match what he foregoes to accept the job. In light of this, how can we judge the costs of sinecures and disguised unemployment? Certainly not by the "what is put in" route.

3) The question of what the cost would be of devoting "x" resources to education rather than another alternative is raised. Not the units put in, but again the reliance upon costs based upon the possible earnings of students if they have not entered this program. Opportunity costs for national aggregate planning is discussed and assumed to be somewhat on the idealistic side--an approximation to maximum potential.

The latter part of the paper deals with time-sequence and time-dimension problems of opportunity costs.

Brand, William. "Some Reflections of Centralization versus Decentralization in Education." Organizational Problems in Planning Educational Development. ed. by UNESCO. Paris: Study Group in the Economics of Education, UNESCO, no date. Chapter 6, pp. 65-73.

Brand presents cases for both centralization and decentralization, discusses the difficulty of measuring educational performance, describes the Netherlands experience (centralized) and looks at centralization vis-a-vis economic growth demands.

Decentralizers hold the individual student and his environment to be the most important factors to be considered, and the centralizers place more emphasis on the efficiency of the whole system. Good arguments are presented on both sides--no conclusions are reached.

He is concerned with the trend to follow economic demand (manpower requirements) to control admissions or to size of universities. He sees need for centralized intervention in some instances--research coordination for one--but there should still be a high degree of local responsibility.

He then proceeds in two directions: 1) that education will soon transcend national boundaries and 2) that the individual teacher is the backbone of education.

Committee on Educational Finance. So That You May Know about Financing Public Schools. Washington, D. C.: National Education Association, 1965.

This study is designed for United States citizens interested in the problems of financing the public schools. Seven basic questions with points of view on each are presented at the first of the guide. A discussion of the rationale--both pros and cons--is followed by a discussion of school budgets. This discussion includes the divisions within educational budgets and an introduction ~~to~~ the tax bases for public education. Indications of the proportionate amount of public-school support received from local, state, and national governments are also included.

Correa, Hector. Educational Planning: Its Quantitative Aspects and Its Integration with Economic Planning. Paris: International Institute for Educational Planning, 1965. (Working Draft) 309 pp.

Chapter XII, "Costing and Financing the Educational Plan," is of particular concern for the person interested in the financial aspects of education. The reader is taken through a consideration of past and present spending in education, costing the targets set for the educational plan and the financial feasibility of the plan.

His discussion of sources of funds required for the plan through projection of present income, gross national product, and foreign-assistance levels is concise and to the point.

Correa has put together a piece which should be required reading for all who wish to work within the context of planning in a developing area. His inclusion of a hypothetical case study to parallel the theoretical discussion makes it more comprehendable to the educator with little or no background in economics or quantitative methods.

This work could be used very well as a text in a course devoted to educational planning. He begins with population and labor force and concludes with the financing of the developed educational plan.

Edding, Friedrich. "Estimating Costs of Educational Requirements." Planning Education for Economic and Social Development. ed. by Herbert S. Parnes. Paris: OECD, No date, Chapter 23, pp. 233-243.

Very simply, Edding discusses why educational costs must be estimated, how they can be estimated, and how these estimates can be improved.

Political decision-makers allocating resources in the public sector demand cost estimates. When speaking of small changes and short-term plans, estimates of cost are not as essential, but when thousands of facilities are involved, cost estimates must be calculated.

The methods suggested for forecasting total costs follow this basic pattern: determine costs now per pupil or per place by a few different methods, assume the highest one will be the average in the target year and calculate the costs in the target year. These costs would, of course, be calculated for each type of school since costs do vary from type to type.

He admits that the present state of statistics and finances in developing countries makes it very difficult to obtain even the roughest measures of present costs. He offers some guidelines and boundaries to assist the novice.

Improvements in planning would be forthcoming from more comprehensive analysis of component costs within the system. The apparent discrepancies in educational costs in two schools of equal proportions can only be determined through this micro-analysis.

He closes with a story of the author who leaves the translation of his book to one man and does not check the translator--the educator who fails to estimate his costs.

Edding, F. "Expenditure on Education: Statistics and Comments." The Economics of Education. ed. by E. A. G. Robinson and J. E. Vaizey. New York: St. Martin's Press, 1966. Chapter 2, pp. 24-70 Inc. Annex.

This paper delves into what has happened in education in developed and developing countries for a number of years. The uses of these statistics are basically of a "picture creating" nature--getting an idea of relationships and trends.

The rates of growth of various monetary measures (educational expenditures, GNP and public expenditure--whole and per capita) are investigated. Educational expenditure growth seems to have been greater than GNP.

The components of educational expenditure by level of education and level of government are investigated showing a rather recent trend away from primary education as the major expense and both increases and decreases in the federal contribution to education.

He constantly reminds us that the need for rational decision-making in education is now upon us which would pressure us to avoid "fancy" as a criteria for change and would remain with the necessities.

His conclusion indicates his feeling that research into unit costs and their minimization has been avoided. He also warns against expansion of education in the conventional manner due to rising marginal costs.

Firman, William D. "The Relationship of Cost and Quality in Education." Long Range Planning in School Finance. ed. by Committee on Educational Finance. Washington, D. C.: National Education Association, 1963.

This investigation's stated purpose--to relate quality to cost in education--is not reached due to the fact that the criteria for quality have not been fully defined. Even upon attempted definition, they prove so varied as to give different relations for each quality criterion.

Goode, Richard. "External Aid for Investment Education in Developing Countries." Financing of Education for Economic Growth. ed. by Lucille Reifman. Paris: OECD, 1964. Chapter 3, pp. 41-56.

Whether education is to be viewed as consumption or investment, external aid is practical. The difference in definition would lead to allocation to different areas of education. The fiscal weakness of developing countries, along with migration factors, argues for domestic taxes for educational finance rather than fees. The rationale of the beneficiaries of "spellovers"--those educated who migrate--helping the place from which they came is a rationale for external assistance.

Arrangements which allow a government to devote more of its resources to education fall under the blanket of external aid to education. These resources do not have to be financial, the supplementation of educational personnel is a possible resource. The problem of quality versus quantity of teachers is also considered.

In discussing the allocation of assistance among and within countries, the basic argument revolves around the capacity to use the external aid--absorbative capacity. The stipulation of a development plan by funding sources may lead to the production of some worthless documents. The general trend to vocational education is recognized, but he warns that too much emphasis in this direction places too much reliance upon the manpower estimates.

The functions recommended for assistance are planning, construction and equipment, teacher-training and current operations. Routine current costs--no, but those connected with the introduction of new programs--yes.

Two other forms of assistance--study abroad and loans and grants are considered. Study abroad, when appropriate to local environment, is necessary since it may prove far cheaper than the construction of a university. Grants are preferable to loans since most developing countries cannot reap the benefits required to service the loan. Both are appropriate with the above in mind. Assistance which allows a country to devote more of its own resources to education is important.

Hanson, Nels W. "The Size-Cost Relationships in Public Schools." Trends in Financing Public Education. ed. by the Committee on Educational Finance. Washington, D. C.: National Education Association, 1965. Proceedings of Eighth National Conference on School Finance, Chicago. pp. 125-133.

A short theoretical discussion of the basis for the study is presented verbally and graphically. The graphical displays lead to an understanding of economy and diseconomy of scale and marginal costs.

The analysis (577 school districts in 1958-59) was made on data from nine states--individually and in total. A unit cost residual factor was used after adjusting for social and economic characteristics of the districts. In general, the findings bore out the assumptions that unit costs decline as district size increases to an optimum district size and unit costs rise thereafter. In three of the states (Massachusetts, Washington, and Wisconsin) the largest districts studied were still on the declining average cost end of the scale.

Hirsch, Werner Z. Program Budgeting for Education. Paper presented at Operations Research Society of America, 1966, Santa Monica, California. Los Angeles: Institute of Government and Public Affairs, 1966.

This paper is basically concerned with the improvement of budgetary procedures in the direction of the program budget which will enable the planner (manager) to be more capable of rationally distributing scarce resources.

The main aspects of program budgeting are structural, analytical and administrative-organizational.

Structural: cost data in terms of program and sub-programs, clear delineation, specific goals, building blocks covers extended time horizon.

Analytical: (tools used) cost benefit; uncertainties considered.

Administrative-organizational: provide a basis for administration, revising, and enforcing alternative decisions.

The more centralized the government, the more applicable this method would be according to Hirsch.

Inputs to education are from so many and varied sources that a concise analytic picture is needed to measure outputs and make allocations and reallocations.

Musgrave, Richard A. "Notes on Educational Investment in Developing Nations." Financing of Education for Economic Growth. ed. by Lucille Reifman. Paris: OECD, 1964, Chapter 2, pp. 31-40.

Musgrave argues that the main reason for underdeveloped countries not being able to develop at a faster rate is due to "limitations imposed by the human factor." He discusses divisions and subdivisions of investments in education under the three main areas of consumption (enjoyment of the fuller life), internal (increased earnings to the educated person) and external (benefits to the economic and social systems). The relatively long life of the educational asset and opportunity costs of lost income are also considered.

In deriving the economic benefits of education in underdeveloped countries, one must be sure to include the external benefits since they are a great proportion of the economic return from education.

In discussing educational targets, the inatabilities within the educational system and external to it are stressed. The ability to absorb the educated is also considered here (including the problems of lowering former colonial pay scales). He uses Harbison and Myers' priorities for Level I and Level II countries.

The question of general financing vs. "earmarked" financing is raised and resolved in favor of general financing since these funds are not a substitute for a direct change. He also leans toward reliance upon on-the-job training for much of the needed middle-level manpower.

Netherlands Economic Institute. "Financial Aspects of the Educational Expansion in Developing Regions: Some Quantitative Estimates." Financing of Education for Economic Growth. ed. by Lucille Reifman. Paris: OECD, 1964, Chapter 4, pp. 59-72.

After considering manpower estimates for 1975 and two ways of estimating the numbers of students in 1975, this report discusses the financing of future education levels. All of these discussions concern Africa (as a whole), Latin America (as a whole), India, and the rest of Asia.

Standard cost data is presented for these geographic areas--with generalizations for the whole area on per-student and per-place bases for both recurrent and non-recurrent costs.

The above calculations were performed for alternative targets which increased the possibility of a fit between costs and finances available. This fit--with lowest percent enrollment versus highest percent of GNP to education was not reached in Africa, Asia, or India.

From the previous calculations of student populations, cost estimates were derived for 1975. The conclusions reached--after noting the gross costs are two: 1) with the exception of Latin America, the costs are far above the financial abilities of the countries, and 2) the hope that they have systematically over-estimated the magnitude of the problem.

OECD. "The Costs of Education--Methods of Analysis and Projection." Methods and Statistical Needs for Educational Planning. Paris: OECD, 1967. Chapter 6, pp. 69-86.

The fourteen pages in the body of this chapter could be used as an outline for writing a book of the same title.

The first section consists of the statistics and methods needed to analyze past experience within the system and how it can be presented in logical form. The concept of educational price indexes is brought forth here. Although this may prove a difficult task, it would be beneficial in projecting future costs.

The second section concerns projecting educational expenditures in light of the information you have and the purposes for which you are working. A discussion of alternative capital expenditure projections is included.

The last section deals with the final give and take involved in preparing the financial plans.

The appendix classifies types of direct and indirect aid which can be given to students through the educational system.

Phillips, H. M. "Education and Development." Economic and Social Aspects of Educational Planning. ed. by UNESCO. Amsterdam: Ysel Press, Ltd., 1964, Chapter 1, pp. 15-57.

The section on educational expenditure, cost and financing (42-47) concerns itself with basic discussion of the sources of financing, school-age populations (how they differ), the part that teacher salaries pay (high percent), the assessment of costs--both receiving and non-receiving, other economic costs, and the relation of educational expenditures to average and GDP.

He concludes this section with a look into financial foreign assistance--needs, types and consequences--concluding that local conditions determine the amount of foreign exchange you need which is directly connected with foreign assistance.

The allocations to education section (47-55) contains a world-wide comparison of allocations to education by level around 1959. The trend noted was for decreasing the percentage allocated to elementary and increasing both secondary and higher education. He then discusses procedures for allocation (part of planning) in a few countries, followed by the results of questionnaires sent to countries concerning their educational planning machinery. The results of this questionnaire indicate that educational planning and its corollary needs have not had high priority in many countries.

Prest, Alan. "Internal Fiscal Policies and Education Programs in Developing Nations." Financing of Education for Economic Growth. ed. by Lucille Reifman. Paris: OECD, 1964, Chapter 1, pp. 17-30.

A discussion of educational needs and objectives in developing countries concentrates on the lowest priorities (large and elaborate universities, science facilities and medicine) and the highest (secondary education and Lewis' sub-professionals). Logical considerations are also needed in expansion of one aspect of education--the needed intake must be provided. The role of the private sector is not to be overlooked in considering finances.

Financial intervention on the part of the government is advocated in terms of financial assistance (marginal) to communities wishing to improve their educational system, tax relief to missions and other voluntary agencies, and tax relief to firms with apprenticeships and training schemes. He rejects such schemes as vouchers for education as being impractical in the countries. Differential grants to poor and relatively rich communities are considered.

Separate sets of taxes for industry and agriculture as beneficieries of the educational system are considered here. The possibility of using loans to finance education seems to be limited by practical considerations. With migration as it is, the locality may not benefit from the bond issue.

The proposition that specific expenditures should be tied to specific revenues--recently unearthed by J. M. Buchanan--is considered and rejected since education is likely to be underproductive in a market economy.

Saxe, Jo W. "Some Questions about the Economics of Education." Planning Education for Economic and Social Development. ed. by Herbert S. Parnes. Paris: OECD, no date. Chapter 5, pp. 49-55.

This essay begins by discussing four methods of looking at the economics of education outlined in a previous OECD paper. These four are: correlation measures, calculation of residuals, direct calcualation of returns and the use of manpower forecasts.

He expresses doubts concerning the first two--using the arguments of difference of values from country and the unreliability of statistics in developing areas. Calculating the direct returns of education may prove weak if you have two atypical groups in the country (high education-low earnings or low education-high earnings). He expresses no love for manpower planning on the grounds that it leads to absolute immobility of labor.

He then addresses himself to the problem of costs and maximizing outputs, assuming a given level of financial support. He goes on to ask if we might not consider the hours/year use of all capital equipment in our selection of alternatives. In-service education at all levels is his final point--in-service education of the professional included. He refers to this as used capacity for training in society.

Schultz, Theodore W. "Education as an Investment in People." Education and the Development of Nations. ed. by John W. Hanson and Cols S. Brembeck. New York: Holt, Rinehart & Winston, 1966. Chapter 5-1, pp. 127-136.

Schultz first introduces educational benefits as being separable into three "conceptual boxes": present consumption, future consumption, and future producer capacity--the latter two are considered investments.

His discussion of the functions of the educational establishment focused on research, requirement of talent, ability to adjust (jobs), teacher supply and meeting the needs of prospective leaders.

He uses small numeric examples to illustrate what he means by economic growth vis-a-vis the worker. He discusses the role that education has played in the economic development of the United States since the turn of the century noting that as schools improved, so did economic growth rate.

He argues that there are high returns from investment in research and concludes by aluding to investment in schooling today as a major source of human capital.

Smuckler, Ralph. *Education and Development Administration*. A Comparative Administration Group Occasional Paper. Bloomington: American Society for Public Administration, 1966. 31 pp.

This was directed toward one interested in the administration of development aid programs. Smuckler outlines a few general problems facing those working in these programs. A portion of those problems are general to any work by a non-national in a developing country and others are specific to the educational scene. The main body of the work concerns itself with the administration and its relations and interrelations with both educational planning and institution building. After briefly discussing some of the research on institution-building, he concludes by advocating that all educational processes must be carried on within their total environment.

Solomon, E. S. "Statistical Analysis and Quantification in Educational Planning." *Economic and Social Aspects of Educational Planning*. ed. by UNESCO. Amsterdam: Ysel Press, Ltd., 1964, Chapter 8, pp. 147-163.

After discussing the calculation of derived needs of the educational system in terms of students and teachers, implications of shifts of enrollment pyramids and quantified flow through models of educational plans; the costing of educational plans is discussed. His scheme does not include foregone earnings on the part of the student--only the monetary costs.

His costing estimates are based on cost per pupil--computed from cost per class--for the recurring expenditures and cost per place--computed from cost per classroom--for capital outlays. The concept of estimating costs per pupil of capital costs by spreading them over the years of use is also suggested.

It is noted that as you proceed up the grades, costs become more dependent upon type of education, and that separate estimates must be made for each type of education.

Strumilin, Stanislav. "The Economics of Education in the U. S. S. R." *Economic and Social Aspects of Educational Planning*. ed. by UNESCO. Amsterdam: Ysel Press, Ltd., 1964. Chapter 3, pp. 69-83.

A review of the quantitative developments in Soviet education from the revolution to the 1960's with emphasis placed on the relationship between increases in the educational offerings and the rise of production in concurrent time periods was presented. According to Strumilin, education has proved itself as being economically feasible in the Soviet Union.

He discusses the process of education for literacy--the first priority after the revolution--and subsequent educational efforts which have been undertaken in Russia. In each case he has compared the dynamics of the economy to the educational system and concluded that Russian education has been economically profitable--in terms of national income.

"Investment in public education produces very good returns because it serves the cultural interests of the laboring masses themselves and meets the objective requirements of economic development."

Vaizey, John. "Criteria for Public Expenditure on Education." The Economics of Education. (ed. by E. A. G. Robinson and J. E. Vaizey) New York: St. Martin's Press, 1960. Chapter 15, pp. 451-463.

Vaizey presents a market analogy with education as the product and family the consumer. Through this analogy he discovers patterns of decision-making which must go within families concerning the education of children. These patterns--which change with changes in public health and personal values determine the fluctuations in "demand" for education.

He investigates public interest in education looking at education as investment and/or consumption. Consumption education is viewed from the political and social demands for it, and investment education is viewed from its relations with economic development.

Other criteria which he reviews are those which relate educational expenditure to other financial data. He looks at the Correa-Tinbergen model using international comparisons with percent of GNP devoted to education. He also discusses Lewis and Martin's investigation of percent national income devoted to public expenditures and education's portion of that. The problem of a base for international comparisons of this nature is raised.

He advocates that educational expenditures be coordinated with other social and economic expenditures to avoid duplication and movement in opposite directions. Not only is this an external problem, he says, but internal also. The problems of allocation within education are important!

Vaizey, John. The Economics of Education. Great Britain: The Free Press of Glencoe, Inc., 1962.

This is a basic text (collection of essays) on the economics of education. The underlying theme throughout is that education *per se* leads to a rise in the standard of living.

Vaizey treats economists such as Adam Smith and Marx and their thoughts which have relevance to education. He asks not only what is education, but what are we investing in when we allocate money to education and in what ways to the returns of education reveal themselves.

Where do the finances for educatinn come from and how they are allocated is discussed with reference to four countries. The emphasis here is the reflection to total public finance of educational expenditures.

He continues by discussing just how productive education really is. He then uses this idea of productivity in conjunction with manpower needs in determining the needs of a particular educational system. This develops into rationale for the various levels of education.

He then views the curriculums and mixes of educational levels within the school systems from an economist's viewpoint. This then leads to consideration of how education supports economic growth in general and in three specific cases.

Vaizey, John. "The Strategy of Educational Development in Relation to the Economic Growth of Underdeveloped Countries." Policy Conference on Economic Growth and Investment in Education. Paris: OECD, 1961. III - "Some of the main issues that must be faced in the strategy of educational supply." 25 pp.

The introduction is a good review of the educational background of many developing areas. His argument that education is one of the easiest forms of development which can be undertaken by a developing country does not take fully into account the author Lewis' arguments of the high cost of absorbing educated people. He does stress, though, the use of all educated persons in those areas for which they were educated and conversely educating in the area of need.

In discussing rural and urban education, he takes two lines depending on the economic-development emphasis of the country--agricultural or industrial. Rural areas and their lack of a history of education, their lack of a money economy inhospitable environment to the teacher are seen as difficult areas in which to extend formal education. Urban areas have greater possibilities of economies of scale and establishing secondary education. The availability of teachers is seen as a problem in both areas. The emphasis on technical education and decisions concerning the "right" level of education are seen as dependent upon local conditions. The development of private education in conjunction with scholarships to the needy is seen as a method of avoiding the poor paying for the education of the rich. Women's education is seen as being very influencial since "all learning begins at home." The teacher force's high percent of women is also noted.

Under obstacles to educational expansion he lists: high dropout rates and unnecessary high sophistication training in education; the social expenditures and social inequities under social factors; the teacher supply "spiral," economic and social status of teachers, the social role of women, and non-utilization of unemployed graduates under the teacher problem; and improving internal performance and providing education at low costs under financial costs.

Foreign aid is capable of playing three roles: planning, supplying short-term skilled teachers and the building of institutions. The latter, through a process of bringing people to the host country and training them as a group and sending their own faculty and students to the guest country to build the instiution.

The problem of language of instruction is also considered with regard to textbooks--the major foreign language is advocated as a reading skill alone.

Vaizey, John and Chesswas, J. D. *The Costing of Educational Plans*. Paris: UNESCO, International Institute of Educational Planning, 1967.

The emphasis of this work is in the identification of costs connected with education. Attention is given to consideration of the basic units involved in the planning. The costs listed are more than enough to work with a plan. Although the degree to which they have broken down the costs may not be attainable, it will serve as direction for future collection of data.

A longer plan is preferred over a short-range or medium-range one. Establishing price indexes for educational materials is important for future planning. Anticipation of changes is an important aspect of the planning process. Distinctions between capital costs and recurring costs are drawn and examples given. Chesswas mentions the advantages of standardizing classrooms, buildings, and furniture.

Along with a strong plea for annual review and revision of the plan, they stress the need to closely scrutinize the present utilization of capital equipment before implementing a new plan.

VIII

MEDIA AND CURRICULUM

Anderson, C. A. The Social Context of Educational Planning. Paris: IIEP, 1967.

Deals with seven topics:

1. Ambiguities in the conceptualization of educational planning
2. Multifunctionality of formal education
3. Effective training for occupational goals
4. Socio-political constraints on educational planning
5. Issues of equity and quality
6. Schools as instruments for value reorientation
7. Social context of education determines its effect

Argues for a realistic curriculum, flexible and only broadly differentiated--believes strongly in general education at the secondary level and opposes many popular proposals and feels that schools should have more autonomy. He says, "Educational planning is less concerned with ensuring the proper flows of men into occupations than with establishing effective linkages of schools to programmes for the utilization of trained men and to other social forces contributing to modernization."

Brickell, Henry M. Organizing New York State for Educational Change. Albany: State Education Department, 1961.

As a consultant to the State Department of Education, Brickell interviewed school personnel to assess the nature of their reaction to change, and innovations in the school system. He concluded that the three major phases in the life of an innovation are design, evaluation, and dissemination. These are irreconcilable. The hallmark of the design setting is freedom; the hallmark of evaluation is control; and the hallmark of a demonstration setting for dissemination is normality. He also discovered that change, for the sake of change alone, was often a spur to greater achievement.

Cerych, Ladislav. Problems of Aid to Education in Developing Countries. New York: Praeger, 1965.

Looks at educational planning from two points of view:

1. What are the various steps that can be taken, and what strategies fashioned, to ensure that educational assistance produces the greatest possible benefits?

2. What proportion of overall foreign aid should be devoted to education and to the development of human resources as against other aid requirements?

Deals briefly with objectives of the Karachi Plan, the Addis Ababa Plan, and the Santiago Plan.

Discusses effect of external aid on curriculum, teacher supplies, higher education, informal education, and teaching materials.

Useful book-pragmatic and humane.

Illich, Ivan. "The Futility of Schooling in Latin America." Saturday Review. April 20, 1968, p. 60.

Thesis of this article is that elitist society in Latin America intends to keep it that way, and the only avenue remaining for development is adult literacy and vocational training. Suggests possible value in industry subsidized adult training, and a reduction in allocations for formal education so that adult education might benefit. He advocates a shortened formal-school period and a considerably lengthened adult-education period.

Organization for Economic Cooperation and Development. Curriculum Improvement and Educational Development. Paris: OECD, no date.

Looks at the compelling forces of educational change in terms of numbers, expansion of knowledge and social demand for education and the role curriculum plays in educational development. In the main, the argument here is for general liberalizing education rather than vocational training. Excellent, if somewhat brief, review of curriculum considerations. Perhaps somewhat more applicable in developed countries, but certainly has use in curriculum planning everywhere.

Organization for Economic Cooperation and Development. Organizational Problems in Planning Educational Development. Paris: OECD, 1966.

Lists three functions of education:
1. Education is an instrument of social change;
2. Education is an important social science;
3. Education is a major instrument of rational income distribution.

No. 2 embraces demand aspect and no. 3 raises questions of regional distribution of educational institutions. No. 1 raises questions of values.

Educational Planning has four important steps in programming the supply of skills on the basis of requirements:
a. forecasting skill requirements in broad categories;
b. translating the skill categories into educational requirements;
c. programming supply of skills through educational institutions;
d. implementing these programs by translating broad categories into specific lines of action, e.g., projects.

Organization for Economic Cooperation and Development. Social Objectives in Educational Planning. Paris: OECD, 1967.

"To the extent that schools affect their pupils ability, it is their personnel which is the effective agent. Each pupil is influenced by the educational strength represented in the families which patronize the school, taken as a whole. Also, the pupil's ability is correlated with, and probably influenced by, the teacher's ability. All else about the school, including such things as the presence or absence of libraries and science laboratories, is less significant for educational results than its membership." (This reinforces the James S. Coleman Report "Equality of Educational Opportunity.")

Schramm, Wilbur. Mass Media and National Development. Stanford: Stanford University Press, 1964.

Develops the role of mass media in national development, first of all from a social-change point of view, and then from the pragmatic, "what mass-media communication can do" viewpoint. Discusses the need for and meaning of achieving literacy (his "great campaign" concept) and lists recommendations for mass-media growth in emerging countries. The watchman, policy instruction role of communication and information is stressed.

Schramm, Wilbur; Coombs, Philip H.; Kahnert, Frederick; and Lyle, Jack. The New Media: Memo to Educational Planners. Paris: UNESCO, 1967.

First section is given over to case studies of new media projects throughout the world, such as the TV installation in Samoa. Admits that there is still no abundance of research findings that support the use of new media, but feels that what data exist are favorable. The last part of this book really is a memo to planners and offers arguments and information that planners would need to construct a new media project plan, including how to gain support from top administrators. Suggests slow pace at first, with lots of evaluation and feedback.

United Nations. Pulp and Paper Prospects in Latin America. New York: United Nations Food and Agriculture Organization, 1963.

Compares the pulp and paper production in Latin America with world performance and gives detailed information about each Latin American country. Includes background information as well as pure performance data.

UNESCO. World Communications: Press, Radio, Television, Film. Paris: UNESCO, 1964.

Takes each country in the world and gives, in a page or two, comparable data relative to use and availability of media, and includes special background information that may have bearing on trends. A more recent publication date would be desirable.

Wright, Peter C.; Rich, Thomas A.; and Allen, Edmund E. The Impact of a Literacy Program in a Guatemalan Ladino Community. Tampa: AID, 1967.

Defines literacy in terms of Lerner's "empathy" need, peasant need and literacy's correlation with health and death, innovativeness, travel, farm size.

Findings: Adult literacy is first step to the rural development and provides insight into purposes of education. Literacy does not provide low-cost fertilizers, credit and increased productivity. Authors list fifteen recommendations and observations relative to successful implementation of a literacy program. Much of this report is given over to discussion of the research methodology and sample of material used. A very useful publication, especially for one interested in literacy research.